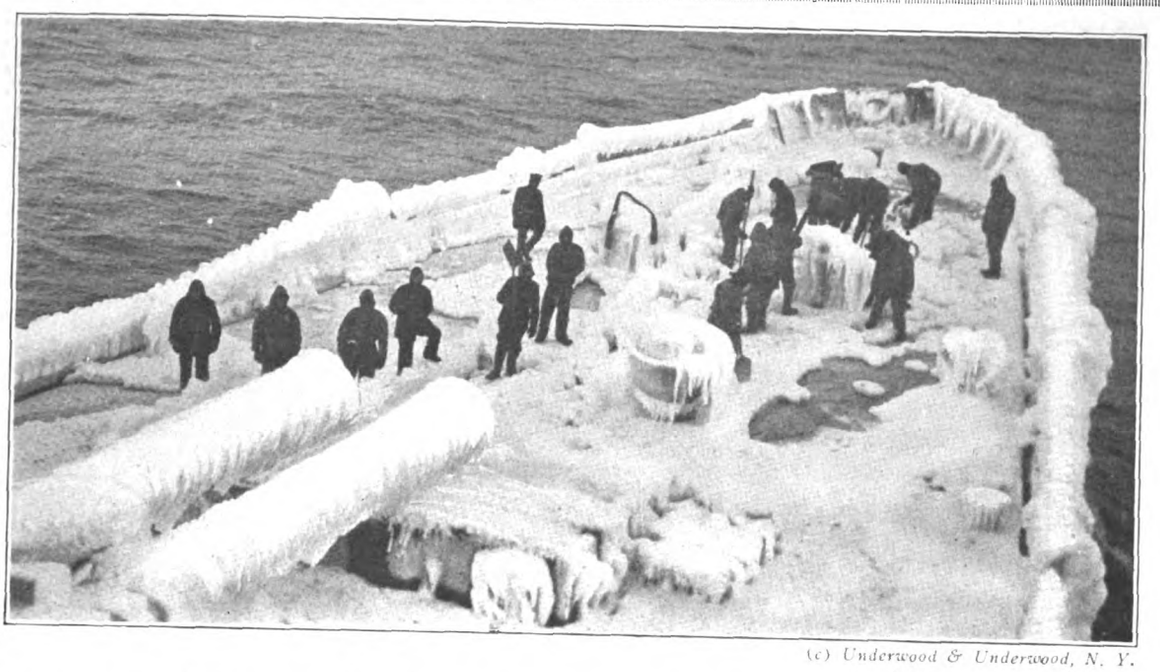


(c) Underwood & Underwood, N. Y.

Thirty Years' Service in the U. S. Navy Finds "85% Magnesia" Still the Standard

This picture only shows one phase of the many severe conditions that our Navy is called upon to face in the course of the year.

Since the war started, these conditions have been more onerous than ever before. Our battleships and destroyers have been keeping the seas in all weathers, guarding thousands of lives and millions of dollars of priceless stores and munitions, without a single stop, the slightest delay from failure of their steam.

"85% Magnesia" pipe and boiler-covering is the armor that defends the steam of all of Uncle Sam's warships.

Since 1887 the U. S. Navy has specified this matchless insulation for its steam on its Battleships, Cruisers, Destroyers, Transports, and its other craft.

Why? Because in the Navy the hazards are too portentous for any steam-insulation less than the Unquestioned Best to be employed.

For highest Efficiency, for Invulnerability against leakage and immersion, for Durability under every strain, "85% Magnesia" qualifies today as it did 30 years ago.

That same Efficiency and Durability makes "85% Magnesia" the protective insulation for America's powerful Locomotives for the greatest Power-plants and Industrial Plants for the sky-towering Office Buildings, the vast Terminals, the enormous Hotels, for *every building* where the minimum of Coal for the maximum of Heat is the vital problem.

Write today for table showing actual savings by the use of 85% Magnesia coverings. The Specification for correct application of this master heat-insulation, compiled and indorsed by the Mellon Institute of Industrial Research (University of Pittsburgh), is sent to Engineers on request by the

MAGNESIA ASSOCIATION of AMERICA

721 Bulletin Bldg. Philadelphia Penna.

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D. Crabbs, The Philip Carey Co. . . Cincinnati, Ohio
Alvin M. Ehret, Ehret Magnesia Mfg. Co., Valley Forge, Penna.
J. R. Swift . . . . The Franklin Mfg. Co., Franklin, Penna.
R. V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Penna.

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

BUILD MORE SHIPWAYS AT SPARROWS POINT

Impetus of Permanent Peace Plans Now Stimulates Building in North and South

The Bethlehem Shipbuilding Corporation, Ltd., Sparrows Point, Md., is building three new shipways. These new ways will make a total of ten shipbuilding berths at the plant, and will be augmented by a floating drydock and a number of shop extensions. The drydock, to be completed early in the coming year, will be of 20,000-ton capacity, and will be used for repair work on vessels of large type. Ten all-steel ships of from 5,000- to 15,000-ton capacity have now been completed. Seven vessels are in course of construction, four of these finished early in January. The company is now giving employment to about 10,000 men, and expects to increase this number at an early date. The Aberthaw Construction Company, Boston, Mass., are handling the construction work.

The Carolina Shipbuilding Corporation, Wilmington, N. C., of which Lorenzo Dilks is president, is making substantial progress in the construction of all-steel freighters for the Government. The first vessel was launched early in November. The freighter is of 9,600-ton capacity, 419 feet over all, with 85-foot beam. Each boat is expected to be ready for delivery to the Government in 201 working days from the time of laying the keel. A total of twelve of these freighters will be constructed at the shipyard on the Cape Fear River.

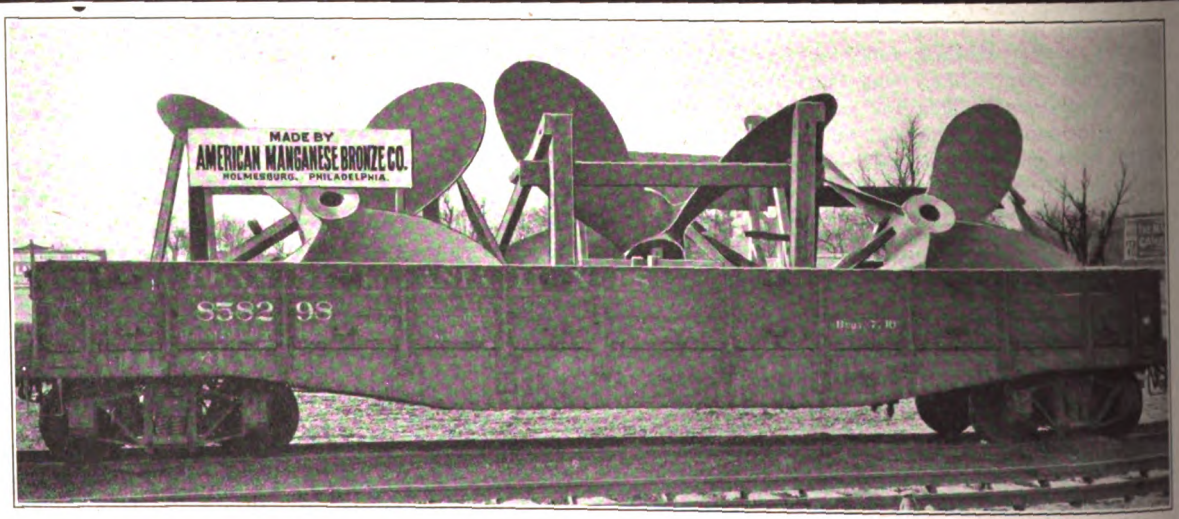
Following its recent purchase of property at Camden, N. J., the Delaware Shipbuilding & Repair Company, 308 Chestnut street, Philadelphia, Pa., is understood to be planning for the construction of a new shipbuilding and repair plant. The site includes about 12 acres of river front property at Erie and Birch streets, and carries an assessment of about $90,000.

The MacDonald Engineering Company, Chicago, Ill., has acquired property at Aransas Pass, Tex., for the construction of a new shipbuilding plant to specialize in the construction of concrete barges. It is proposed to inaugurate work on the plant at an early date; this will include shipways, machine shops, mixing plant and other structures. The company is understood to have a contract for the construction of a number of barges, each about 270 feet long, with capacity of about 3,500 tons.

The H. E. Crook Company, Baltimore, Md., is completing the erection of several additions to its plant, including joiner shop, woodworking plant and other structures, and will install machinery for increased operations. The plant is specializing in the production of schooner barges for the Emergency Fleet Corporation. Three such vessels, each of 2,500-ton capacity, are now being completed. M. M. Davis & Sons, Solomon's Island, Md., will install the mechanical equipment on tugs being constructed for the Emergency Fleet Corporation at the Crook Company yards. This will include engines, boilers and auxiliary power plant equipment. The works now employ about 300 men.

During the past year the Submarine Boat Company, Newark, N. J., has erected a total of over thirty new buildings at its Port Newark plant, with aggregate investment of about $700,000 for this feature alone. The different structures include two steel fitting buildings costing $110,000; brick and steel forge shop, $25,000; steel boiler house, $10,000; steel engine house, $19,000; lunch room for employees, $45,000; pump house, $5,000; nine mess houses, $27,000, and seven compressor houses, $14,000, as well as a large number of smaller structures. The company has launched 17 of the 150 vessels which it will build for the Emergency Fleet Corporation; 28 more are now under way. The company intend to make the plant a permanent shipyard for the construction of merchant and other vessels. About 15,000 men are now employed. This number, it is said, will be increased.

The Norfolk-Hampton Roads Dry Dock & Ship Repair Corporation, Norfolk, Va., has been organized, with a capital of $7,000,000, to construct and operate a local shipbuilding and repair plant. J. B. Morgan is president, O. B. Woodridge, secretary and treasurer. A site of about 250 acres has been acquired. The different structures to be erected will include machine shops for construction and repair work, foundry, pattern



"MANGANESE BRONZE PROPELLERS"

Have been made by us for the following well known concerns

American International Shipbuilding Corp.
Baltimore Dry Dock & Shipbuilding Company
Bethlehem Shipbuilding Corporation
Canadian Vickers, Ltd.
Federal Shipbuilding Company
Manitowoc Shipbuilding & Dry Dock Company
Newport News Shipbuilding & Dry Dock Co.
New York Shipbuilding Corporation
Norfolk and Washington Steamship Company
Pocahontas Fuel Company
Pusey and Jones Company
Red "D" Line of Steamships
Standard Shipbuilding Corporation
Standard Motor Construction Company

Be Convinced, Write for Pamphlet "C".

AMERICAN MANGANESE BRONZE CO.

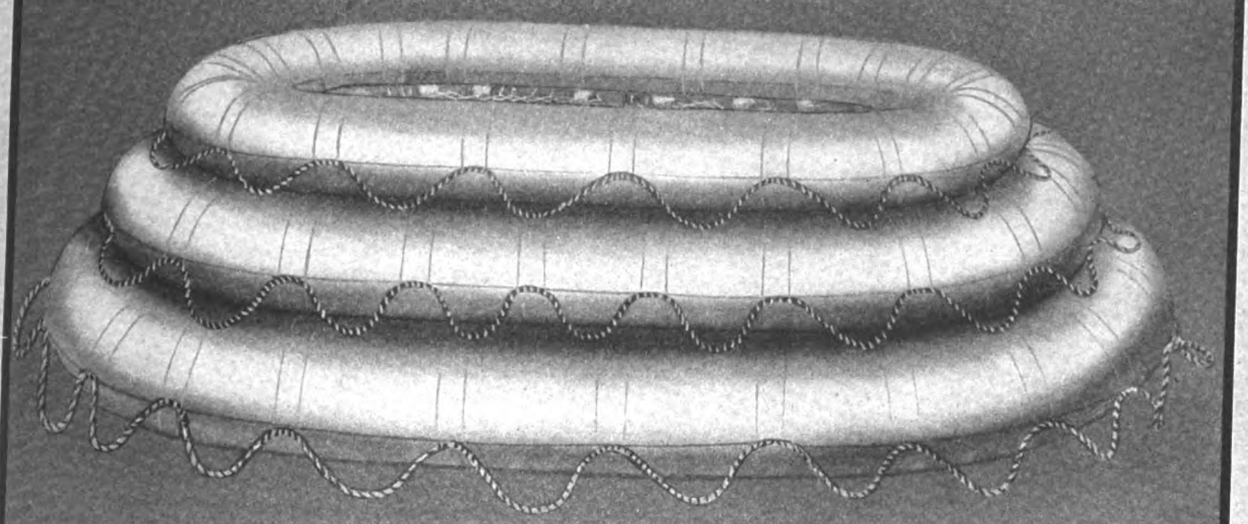
Holmesburg, Philadelphia, Pa.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.
Welin Marine Dept. 50 E. 42nd Street, New York

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

shop, general construction buildings and other miscellaneous structures, including two drydocks, with capacities of 10,000 tons and 15,000 tons, respectively. It is said that the plant will give employment to about 5,000 men for initial operations.

The Maryland Shipbuilding Company, Soller's Point, Md., has commenced the construction of new shop buildings. This plant, which is now in full operation with four shipways, is specializing in the construction of wooden vessels of the Ferris type, each of about 3,500 tons capacity. Other types of vessels are now on the ways. Three will be completed at an early date. The plant covers an area of about 50 acres with water-front and is now giving employment to nearly 800 men.

The William Cramp & Sons Ship & Engine Building Company, Philadelphia, Pa., has recently filed plans for the construction of a number of additions to its plant at Beach and Ball streets. The new structures include a one-story brick machine shop, about 85 by 220 feet, to cost $65,000; a two-story forge and blacksmith shop, to cost about $35,000; two-story engine house, about 300 by 400 feet, to cost $100,000, and small one-story shop extension, to cost $5,000.

Early in January the Foundation Company, 233 Broadway, New York, will shut down its shipbuilding plant at Kearny, N. J., which has been constructing a number of wooden vessels for the Government. Following the launching of the tenth vessel at the yard, November 16, the works were partially closed down. The yard is the first of the wooden shipbuilding plants to complete its contract with the Emergency Fleet Corporation. For the past few weeks about 400 men have been employed, fitting out the last two vessels with power and mechanical equipment. The machinery and equipment of the plant are now being disposed of to other shipbuilding interests. Former employees of the plant are now engaged at the works of the Submarine Boat Company and the Federal Shipbuilding Company, both in this vicinity.

The Fraser-Brace Shipyards, Ltd., Montreal, Can., has been incorporated by Darley B. Smith, Frank M. Jordan and others of Montreal.

J. P. Donohue, manager of the Standard Shipbuilding Company, Dominion building, Vancouver, B. C., is preparing plans for a shipyard at Port Henry, B. C.

E. C. Ryan, Ballinger, Tex., has purchased 146 acres of land at Harbor Island, and plans to build wharves, piers, slips and warehouses for handling freight.

The Detroit & Windsor Ferry Company, Amherstburg, Ontario, Can., is planning to build a concrete dock.

Drawings have been prepared for the floating drydock, shops and repair plant, involving an expenditure of $10,000,000, at Jeffries Point, Boston, Mass., for the Emergency Fleet Corporation, which is also planning to build a 5,000-ton drydock at Plymouth, N. H., to cost $900,000, and also a drydock at Portland, Me.

The Navy Department, Washington, D. C., is planning to spend $5,000,000 during the coming year for additions to the shipbuilding plant at the League Island navy yard, Philadelphia, Pa.

PLACE GOVERNMENT CONTRACTS AGGREGATING $1,700,000

Private Contracts Now Have a "Look In" on Busy Yards

The United States Navy Department has let a contract for additions and repairs at the Charleston, Mass., navy yard to cost $900,000.

The Rhode Island Dry Dock & Marine Engineering Company, Providence, R. I., has received a contract from the United States Shipping Board to build a drydock in Providence harbor, to cost about $400,000.

The United States Coast and Geodetic Survey, Washington, D. C., will shortly order the construction of two vessels for use on the Pacific Coast, at a cost about $400,000.

The Fore River Shipbuilding Corporation, Quincy, Mass., will build two 33,000-ton superdreadnoughts for the United States Navy Department; the Newport News Shipbuilding & Dry Dock Company has one already well advanced in construction and will build another. The building of these ships was authorized by Congress in 1916, but their construction has been delayed on account of the war.

The Terry Shipbuilding Company, 79 East Forty-fifth street, New York, is building twenty steel barges for the United States Shipping Board Emergency Fleet Corporation.

The Calais Shipbuilding Company, Calais, Me., is building two 2,500-ton wooden seagoing barges.

LONGMANS' BOOKS ON SHIPBUILDING

PRACTICAL SHIPBUILDING. **A Treatise on the Structural Design and Building of Modern Steam Vessels**

By A. CAMPBELL HOLMS, *Surveyor to Lloyd's Register of Shipping. Sixth Printing. 2 Vols. Vol. I. Text, Royal 8vo.; Vol. II. 133 plates of diagrams and illustrations. Oblong 4to. $20.00 net.*

The revision recently made was extensive and thorough. Large portions were entirely re-written and the whole brought up to date by numerous additions, alterations, and amendments. Three new chapters were added on longitudinal framing, damage repairs, and lifeboats and davits. A large amount of new matter was also added in connection with oil vessels, oil fuel, fire extinguishing, freeboard regulations, and bulkhead subdivision.

"The book, as a whole, represents the most complete work in existence on the subject of practical shipbuilding."—*Marine Engineering.*

A TEXT BOOK ON LAYING-OFF; OR, THE GEOMETRY OF SHIPBUILDING

By EDWARD L. ATWOOD and I. C. G. COOPER, *Senior Loftsman, H. M. Dockyard, Chatham, Lecturer in Naval Architecture at Chatham, Lecturer in Ship Carpentry at Whitstable. With diagrams, 8vo. New Edition. $2.00 net.*

TEXT-BOOK OF THEORETICAL NAVAL ARCHITECTURE

By EDWARD L. ATWOOD, *M. Inst. N. A., Member of Royal Corps of Naval Constructors, formerly Lecturer of Naval Architecture at the Royal Naval College, Greenwich. Author of "Warships," etc. Ninth edition. With 169 diagrams and 5 folding tables. Crown 8vo. $3.50 net.*

Clearness and conciseness of expression characterize this book. A notable feature is the direct practical application of the methods taught. Two new chapters have been added to this edition, one on launching calculations, and one on the turning of ships.

WARSHIPS. **A Text-book on the Construction, Protection, Stability, Turning, etc., of War Vessels**

By EDWARD L. ATWOOD. *With numerous Diagrams. Sixth Edition. Medium 8vo. $4.25 net.*

Though intended primarily to provide naval officers with authoritative data on the subject, the work will also prove a useful introduction to naval architecture for apprentices and students at dockyards and elsewhere.

The various changes of practice made in recent years will be found embodied in this edition.

STEEL SHIPBUILDER'S HANDBOOK. **An Encyclopedia of the Names of Parts, Tools, Operations, Trades, Abbreviations, etc., Used in the Building of Steel Ships.**

By C. W. COOK, *M. A., B. S. in C. E., Associate Professor of Naval Architecture, University of Southern California. Pocket Size, Leatherette $1.50 net.*

For men working in shipyards, as well as for students in the numerous classes now being conducted in shipbuilding, this handbook will be invaluable. It is the result of a study of the latest and best methods in the large shipbuilding plants all over the country, and contains about 1600 accurate American definitions, arranged alphabetically and completely cross-referenced. In the back of the book are four plates containing drawings of about 300 parts of ships. The size and shape make it possible to carry the book around for ready reference at all times.

A COMPLETE CLASS-BOOK OF NAVAL ARCHITECTURE. **Practical, Laying-Off, Theoretical**

By W. J. LOVETT, *Lecturer on Naval Architecture at the Belfast Municipal Technical Institute. With 173 Illustrations and almost 200 fully worked-out Answers and Questions. 8vo. $3.50 net.*

Intended to supply shipwrights, platers, draughtsmen, and others in the shipbuilding world with a sufficiency of naval architecture for the ordinary and everyday needs and to enable them afterwards to study higher works on the subject with intelligence and profit.

SHIPYARD PRACTICE. **As Applied to Warship Construction**

By NEIL J. McDERMAID, *Member of the Royal Corps of Naval Constructors, late Instructor on Practical Shipbuilding at the Royal Naval College, Devonport. With Diagrams. Second Edition. Medium 8vo. $5.00 net.*

"The information given bears internal evidence of accuracy and brings together probably more information than has ever before been made public as to the details and fittings in man-of-war practice."—*Engineering News.*

STRENGTH OF SHIPS.

By ATHOLE J. MURRAY, *Grad. R. N. C., Assist. M. I. N. A. With Diagrams, 3 Folding Plates, and 1 Folding Table. 8vo. $5.00 net.*

This book is devoted exclusively to the systematic statement of the strength of the structures and detail fittings of ships. The treatment is not academical, but essentially the outcome of practical experience in ship design.

"* * * a work which fills a distinct gap in the literature of the subject, and is sure to take a leading place amongst kindred text-books."—*Belfast Northern Whig.*

Write for our 1918 Catalogue of Pure and Applied Science.

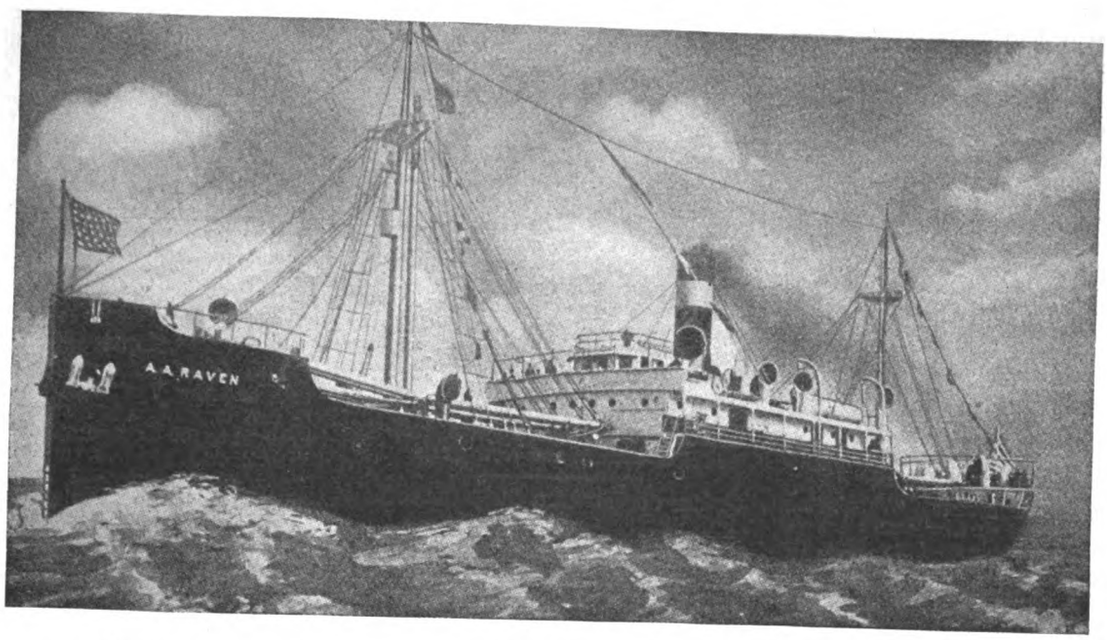
LONGMANS, GREEN & CO., Publishers
Fourth Avenue and Thirtieth Street, NEW YORK

Generated on 2024-09-12 08:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

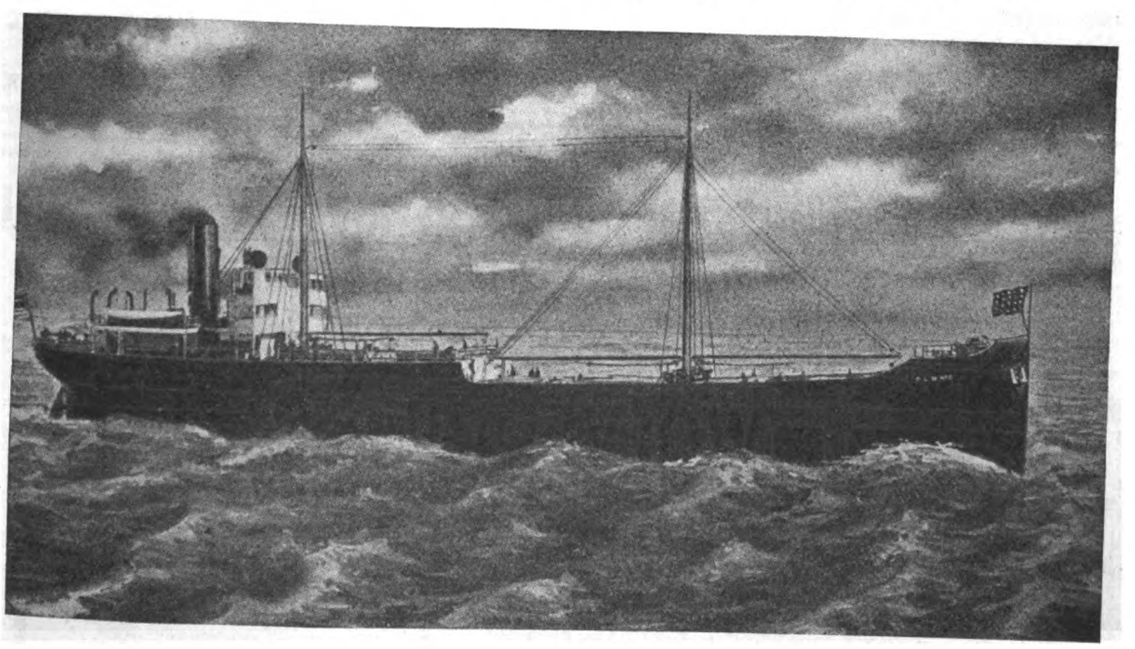
Great Lakes Engineering Works

Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Many years of experience building ships for over sea trade.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The city of St. Louis, Mo., J. A. Hooke, City Hall, engineer, is planning to build a 1,000-foot dock to cost about $350,000.

The American Concrete Pipe & Shipbuilding Company, Tacoma, Wash., is building a 120-ton reinforced concrete fishing schooner, two 100-foot concrete tugs and two concrete scows.

The Johnson Shipyards, Inc., Mariners Harbor, N. Y., has received a contract from the United States Shipping Board Emergency Fleet Corporation to build six 2,500-ton wooden barges and four wooden cargo vessels.

Ira S. Bushey & Son, Brooklyn, N. Y., have received a contract from the Standard Oil Company, 26 Broadway, New York, to build twenty-two wooden coal barges and twelve oil barges.

The National Shipbuilding & Dry Dock Company, Savannah, Ga., has recently received a contract from the United States Shipping Board Emergency Fleet Corporation to build several additional steamers.

It is reported that the Foundation Company, Woolworth building, New York, is considering the conversion of its wooden shipbuilding plant in Tacoma, Wash., into a steel shipbuilding plant with eight ways.

The Todd Shipbuilding Corporation is building a 10,000-ton drydock at the shipyard of Harry Cossey, foot of Henry street, Tottenville, S. I., N. Y.

The Navy Department, Washington, D. C., announces that contracts are yet to be placed for twenty-nine ships, the construction of which has already been authorized. They include two battleships, twelve destroyers, ten submarines, two destroyer tenders, a repair ship, a transport and a submarine tender.

The Todd Shipyards Corporation, 15 Whitehall street, New York, has received a contract from the Navy Department, Washington, D. C., for the construction of six self-propelled steel barges, about 160 by 25 by 11 feet. The boats will be built at the Tebo Basin Works, foot of Twenty-third street, Brooklyn, and the boilers will be constructed at the plant of the Quintard Iron Works Company, 742 East Twelfth street.

L. A. Gardner, Stockton, Me., will build two four-masted wooden schooners

Regular Service to Japan

A regular service has been established between Seattle and Japanese and Indian ports by the Yamashita Kisen Kaisha, one of the four large steamship companies of Japan. Five steamers have been assigned to the run between the Puget Sound port and the Orient by the Japanese Company. The Yamashita Steamship Company was established in July, 1911, and is at present operating forty vessels, with a combined tonnage of 134,733 deadweight tons. Prior to the establishment of the service between Seattle and the Orient the company maintained a regular service between Japan, India and Port Said, Straits Settlements, China and the Philippine Islands. Later this service was extended to London and New York.

Prices on German Ship Materials During the War

Consular information has just been received showing prices on metals prevailing in Germany during the war.

Ship plates and angles closed in December, 1916, with a quotation of 400 crowns f. o. b. mill. (The Danish crown equals 26.8 cents at normal exchange; at present its exchange value is about 30.1 cents.) In January the price was increased 75 crowns, and remained at that figure until March, when it rose 25 to 35 crowns. In October the price was increased 100 crowns, and the year closed with quotations of 600 to 625 crowns—an increase of about 225 crowns in 1917. The increase in 1916 had been 238 crowns.

The price of bar iron increased in 1916 from 132 crowns f. o. b. mill, to 225 crowns in the middle of September. After that time no iron was exported from Germany through the remainder of 1916 and far into 1917, and no quotations were made until June, 1917, when the price was 450 crowns for large shipments, or nearly double the price prevailing in September of the previous year. In February, 1917, the basic price of 375 crowns had been, indeed, quoted on an inquiry, but it was expressly stated that no sales could be made. From 450 crowns in June the price rose to 500 crowns in September, 1917.

Great Lakes Vessels Brought to Montreal

Two Great Lake steamers, the Manola and the Van Hise, are being cut in two in Buffalo preparatory to being brought to the European seaboard. Both vessels will proceed to Montreal this week, where they will be rolled over on their sides so as to get through the canals. The work is proceeding under the supervision of John H. Smith, Great Lakes superintendent for the Federal Shipping Board.

IMPORTANT NOTICE TO SUBSCRIBERS

Our subscribers are requested to notify us immediately whenever they change their address. Otherwise they cannot keep their files unbroken. If subscribers move without notice to us, we cannot duplicate numbers already sent to their old addresses, as many times they are out of print.

MARINE ENGINEERING 6 EAST 39th STREET, NEW YORK

WE ARE SPECIALISTS IN

TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS

IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.

MAKERS OF IRVING'S SUBWAY (TRADE MARK) GRATING THE RETICULATED KIND

Real WOLVERINE Power

"The Motor With the Bore & Stroke"

Fuel Cost Reduced

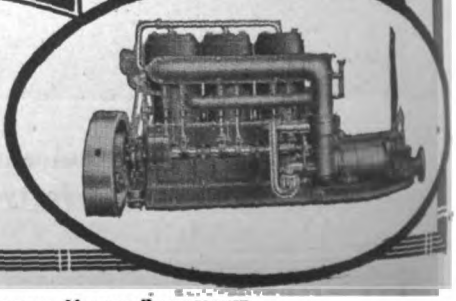
from 70 to 80% without sacrificing reliability, flexibility or control. Perfect combustion on Kerosene or lowest grade of Coast Distillate.

Sizes from 5 to 200 H. P.
1 to 6 Cylinders

Kerosene

The gasoline question has been solved by the

WOLVERINE MOTOR WORKS
Bridgeport, Conn., U. S. A.



When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

KLAXON
PRODUCTS

Intercommunication and Signal Equipment for Ships

THE War is over, but the hazards of the sea have not passed with it. The dangers incidental to water transportation are fundamental and will continue as threatening as ever before—augmented, for some time to come, by the presence of floating mines, etc.

Supplementing the need for protection of lives and property there will now arise a strong demand for the utmost economy in the operation of ships.

In connection with such problems of increased protection and economy we wish to call your attention to the Klaxon Intercommunication and Signal Systems.

These systems are fully described in our Treatise No. 1, which we will be glad to forward you.

KLAXON COMPANY
INDUSTRIAL DIVISION
DEPARTMENT A2 B2 C2

Intercommunication and Signal Engineers

33 WEST 42D STREET NEW YORK, N. Y.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

British Construction of Standard and Fabricated Ships

The following list shows the time taken in the construction of the various A, B and E types of ships recently completed in the United Kingdom:

Yards.	Type.	Laying Keel to Launch. Weeks.	Keel Laid to Completion. Weeks.
Belfast	B	34	35
Sunderland	A	29	37
West Hartlepool...	E	31	40
Stockton	B	33	46
Sunderland	A	36	46
Do.	B	39	56
Dundee	B	47	56

These three types of standard ships are very similar. Their chief measurements are: A and B types, length, 400 feet; breadth, 52 feet; depth, 31 feet; draft, 25 feet 1 inch; indicated horsepower, 2,850; speed, 11½ knots; tonnage, 5,150 gross, and deadweight, 8,200 for the A and 8,100 for the B type. The E type measurements are: Length, 376 feet; breadth, 51 feet 5 inches; depth, 29 feet; draft, 23 feet 9 inches; indicated horsepower, 2,850; speed, 11⅞ knots; tonnage, 4,400 gross, 7,000 deadweight.

The first of the national fabricated ships, which was launched on August 8 from the Wallsend yard of Messrs. Swan, Hunter & Wigham Richardson, Ltd., was completed on September 28, just thirty-one weeks from laying of keel to completion—a very fine record. It is the pattern vessel, from which many others are being built on the fabrication system, with the aid of bridge-building firms. The vessel is 411 feet 6 inches long, 55 feet 5½ inches broad, 38 feet 1½ inches deep, and has a deadweight carrying capacity of 10,500 tons on a draft of 28 feet 3 inches. Bridge builders being unable to deal with curved surfaces, it is built on a "straight-line" form. There is not a single bent frame in the ship, and all the plating, with the exception of some at the fore and aft ends, is straight.

Another vessel, 6,500 tons gross, of almost the same model, but still a new type, designed by Sir W. G. Armstrong, Whitworth & Company, Ltd., has just been launched from that firm's Low Walker yard. It is the first of a series the firm is building, constructed on the Isherwood system

First "Over the Top" in Shipbuilding

With the launching of the United States steamship *Acrema*, on Saturday afternoon, November 16, the full quota of ships for the Government has been rounded out by the Passaic River shipyard of the Foundation Company. This yard was also the first on the Atlantic and Gulf coasts to launch a wooden hull for the Emergency Fleet Corporation. This ship, the *Coyote*, has already demonstrated in service the excellence and stanchness of the Ferris type of construction. She not only survived a hurricane which drove her on the Bermuda coral reefs, and left her pounding there for twenty-four hours, but she returned to New York under her own steam. Examination in drydock showed that no appreciable damage had been done.

In recognition of the speed and the high standard of workmanship maintained at the Passaic River yard, the United States Shipping Board awarded to this yard the first prize pennant won by any shipyard east of the Rockies. Because of these achievements a special feature was made of the last launching.

Progress in Concrete Ship Construction

On November 21 the *Atlantis* was launched at the Emergency Fleet Corporation's yard operated by the Liberty Shipbuilding Company, Brunswick, Ga. She is a 3,000-ton ship, and the first of a series being built for the Government by the Liberty Shipbuilding Company, whose principal yard is at Wilmington, N. C. A 7,500-ton ship and two 3,500-ton ships are also in course of construction. During the second week in November a concrete lighter was launched by the Aberthaw Construction Company, near Providence, R. I.

On November 12 twelve bids were received for the construction of 500-ton navy coal lighters of concrete construction. It is also reported that a large number of barges, lighters and tugs of concrete are involved in the complete programme of the embarkation service, for which bids will be asked about December 1.

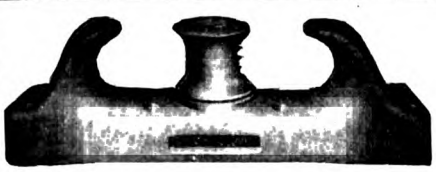
The latest reports from England indicate about 200 concrete vessels are in course of construction, and that the concrete shipyards, equipment and construction, now represent close to $19,000,000 (£4,000,000). Report has been received that a concrete ship of 6,000 tons, built in Spain, has made a successful trial trip.

The final test work has been completed in the "shooting" of concrete on the reinforcing in the construction of a barge. Government experts, and other experts, expressed themselves as entirely convinced of the great success and future of this method of construction after months of investigation and trial.

REG'D TRADE MARK

INTERNATIONAL
COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS
In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually
Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING
INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N.Y.

STRATFORD OAKUM
QUALITY GUARANTEED JERSEY CITY and EVERYWHERE
GEO. STRATFORD OAKUM CO. - - - - - 165 CORNELISON AVE., JERSEY CITY, U. S. A.



Cast Iron MOORING FIXTURES
GENERAL MARINE CASTINGS made to your own specifications

EMERGENCY FLEET STANDARDS
Prompt shipments. Let us quote on all your requirements.
Use Cast Iron Fixtures M-103
CENTRAL FOUNDRY COMPANY 90 WEST STREET NEW YORK
SALES OFFICES:—NEW YORK, CHICAGO, ATLANTA, DALLAS, SAN FRANCISCO.
FOUNDRIES:—BALTIMORE, MD.—LANSDALE, PENN.—NEWARK, N.J.—MEDINA, N.Y. ANNISTON, ALA.—BESSEMER, ALA.—HOLT, ALA.—VINCENNES, IND.
for Deck, Dock and Pier

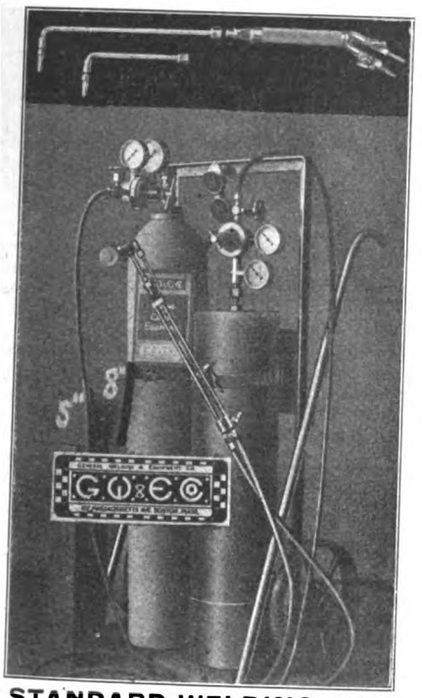
When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

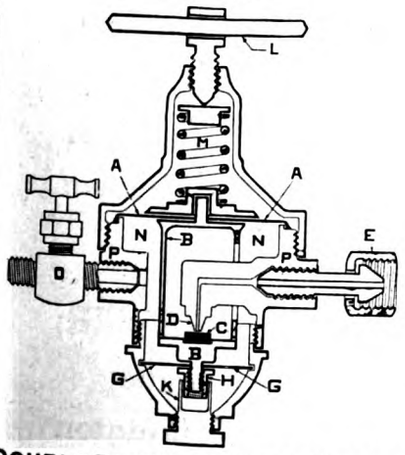
GENERAL WELDING & EQUIPMENT CO.
G.W.&E.CO.
107 MASS. AVE. BOSTON, MASS.

IN USE AT
BETHLEHEM SHIPBUILDING CORP. FORE RIVER, SQUANTUM, PROVIDENCE.
TEXAS STEAMSHIP CO.
CANADIAN VICKERS CO.
WATERTOWN ARSENAL
LORD CONSTRUCTION CO.
GENERAL ELECTRIC CO.
CANADIAN PACIFIC R. R.

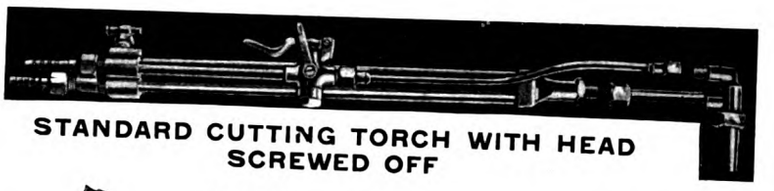
STANDARD WELDING AND CUTTING EQUIPMENT



STANDARD WELDING AND CUTTING EQUIPMENT
$175.00



DOUBLE DIAPHRAGM REGULATOR
PERFECT, FORCIBLE, FRICTIONLESS ALIGNMENT; DIFFERENTIAL SPRING ACTION PRODUCED BY THE DOUBLE DIAPHRAGM (A and G) SYSTEM; QUICK, SENSITIVE AND RELIABLE REGULATION.



STANDARD CUTTING TORCH WITH HEAD SCREWED OFF

STANDARD CUTTING TORCH WITH GUIDE WHEELS

STANDARD WELDING TORCH WITH EXTENSIONS, TO HAVE EITHER A 16-IN. LONG TORCH OR A 22-IN. OR A 30-IN. LONG ONE.

DESCRIPTION:

1 REGULATORS ARE OF THE DOUBLE DIAPHRAGM SYSTEM, THAT IS TO SAY, THE MOVABLE CENTERPIECE B CARRYING SEAT C IS NOT ONLY TIGHTLY FASTENED TO MAIN DIAPHRAGM A BUT ALSO WITH FITTING H TO REAR DIAPHRAGM G. THUS SEAT C IS FORCIBLY GUIDED AND RESTRICTED TO AN ABSOLUTELY STRAIGHT UP AND DOWN MOVEMENT, KEEPING ALWAYS THE SAME RELATIVE POSITION TO NOZZLE D. THE REAR DIAPHRAGM ACTS AS A FORCIBLE AND FRICTIONLESS GUIDE AND ALSO AS A QUICK ACTING DOUBLE WAY SPRING ENFORCING AN ACCURATE AND SENSITIVE REGULATION.

NO OTHER REGULATOR HAS THESE ESSENTIAL FEATURES.

2. WELDING TORCHES CONSIST OF A TORCH BASE WITH 2 EXTENSIONS TO HAVE EITHER A 16-IN. LONG TORCH OR A 22-IN. LONG ONE GIVING YOU PRACTICALLY TWO TORCHES IN ONE. A THIRD EXTENSION MAY BE ADDED TO HAVE A 30-IN. LONG TORCH. THUS ONE TORCH WITH ITS 9 TIPS IS SUFFICIENT FOR ALL POSSIBLE REQUIREMENTS.

3 CUTTING TORCHES ARE SECOND TO NONE IN EFFICIENCY, ECONOMY AND ENDURANCE. EVERYTHING IS OF THE MOST MODERN OPEN CONSTRUCTION. EACH PART CAN BE REACHED AND INSPECTED WITHOUT DELAY. THE PICTURE ON TOP SHOWS A TORCH WITH THE HEAD SEPARATED FROM ITS BASE. BY LOOSENING TWO NUTS THE WHOLE HEAD COMES, SHOWING HOW EASY IT IS TO EXCHANGE EVEN A COMPLETE HEAD.

MANY THOUSANDS ARE IN CONSTANT USE.

4. EVERYTHING IN OUR CONSTRUCTIONS IS EASILY ACCESSIBLE AND EXCHANGEABLE. WITH CARRYING A FEW SPARE PARTS YOU CAN DO YOUR OWN MAINTAINING EVEN IN FAR AWAY COUNTRIES.

GET OUR CATALOGUES.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

The Lane Timber Planer for dressing ship timbers is described in a catalogue issued by the Lane Manufacturing Company, Montpelier, Vt. This timber planer has its table at an advanced height, and its powerful traveling bed is claimed to make it especially suitable for dressing ship timbers. It planes 27 inches by 16 inches and the cylinder raises and lowers by power.

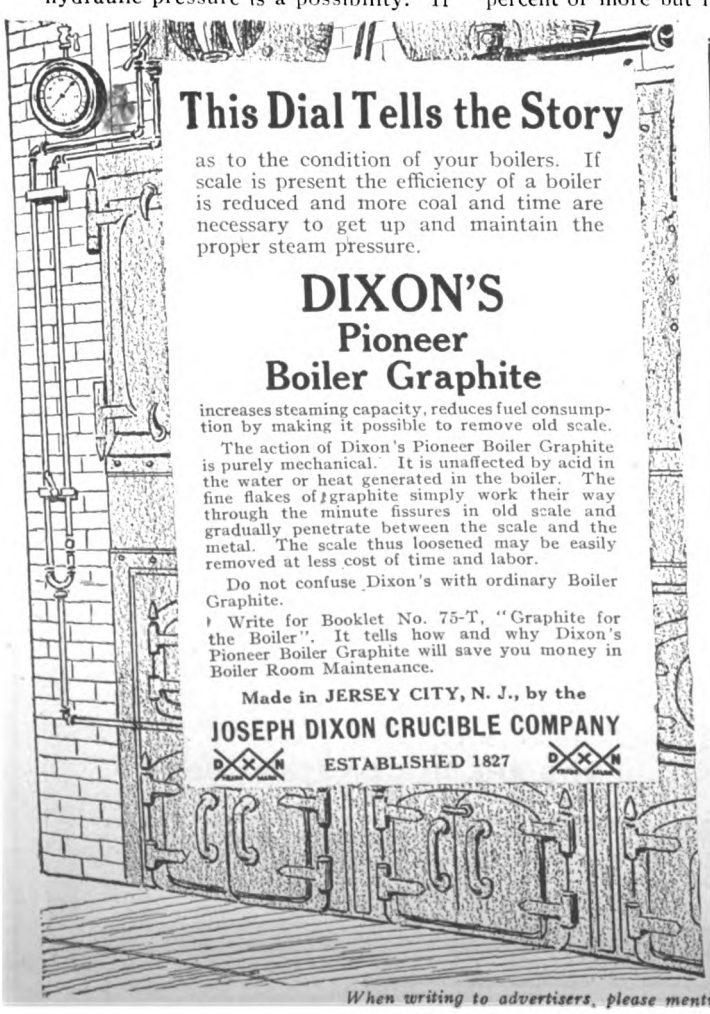
"Toledo" Refrigeration" is described and illustrated in a circular issued by the Refrigeration Engineering Company, Toledo, Ohio. "Your boats won't be held up for refrigeration machinery if you order from us. Our entire plant has been devoted to the manufacture of 1- and 2-ton marine refrigeration sets, and we can guarantee delivery dates. The Toledo unit construction conserves space and saves time and labor in installing. U. S. Shipping Board and prominent shipbuilders are using Toledo. Ask us for details."

"Hydraulic Tools for Shipbuilding" is the title of a catalogue just published by the Watson-Stillman Company, 30 Church street, New York. This catalogue lists benders, shears, forging presses, forcing presses, punches, jacks, accumulators, pumps, etc. It contains some interesting data about hydraulic machinery in general and ours in particular. "In our experience of seventy years building hydraulic equipment, we have eliminated mistakes and have evolved a line of machinery to meet every need where hydraulic pressure is a possibility. If your conditions are unusual, write to us, and our engineers will adapt a standard design to suit or design new to meet your specifications."

Cutting Compounds, Cutting Oils, Drawing Compounds, Soluble Oils and Quenching Oils are the subject of a booklet issued by the Moore Oil Company, Cincinnati, Ohio. "Thirty years' experience in making lubricants fits us admirably for offering this pamphlet on the subject of cutting compounds, drawing compounds, lard cutting oil, quenching and tempering oils; believing in our own mind they are the best that can be made. It is our aim and desire to always offer the best. Our products before being offered to the public are put to the severest test; and long experience in manufacturing teaches us that to maintain a good reputation we must be thorough and have a perfect knowledge of the conditions under which the goods are to be used."

The Lincoln Arc Welder for Speedy Production is described in Arc Welding Bulletin No. 104-0, published by the Lincoln Electric Company, Cleveland, Ohio. "The answer to the urgent call for speedy production is found in the Lincoln arc welder. The complicated corners that formerly meant slow hand riveting and expensive flanging are now welded by this labor-saving tool in a fraction of the former time. The troublesome calking work that used to bulk so large on the timesheets is unnecessary when the seam is welded up solid with the plates. The tedious 'marking out' on special jobs for the drill press operator is eliminated—there are no rivet holes to drill. Not only does the Lincoln arc welder reduce costs by 50 percent or more but it gives you results 35 percent stronger than single riveting and gets them in less time. Investigate the Lincoln arc welder now. Write for our new bulletin on Arc Welding No. 104-0."

The Electric Arc Cutting & Welding Company, 222 Halsey street, Newark, N. J., describes its apparatus in a circular just published. "Cutting and welding apparatus offered for sale previous to the advent of alternating-current machines employed direct current at the arc. The machines manufactured by this company are designed for use with alternating current, and consist of a special transformer with no moving parts. It will last indefinitely, and do all that D-C machines accomplish and a great deal more. Three types are furnished—cutting, welding, and cutting and welding. The temperature and the amount of heat at the arc can be varied to suit the proper melting points of nearly all metals. The ideal condition for electric arc welding is the absolute control of heat conditions, and this is accomplished with our alternating-current machine, automatically and unchangeably, for any given setting through the use of an easily moved shunt in the magnetic circuit. This enables the operator to take care of conditions requiring various amounts of heat at varying temperatures. The efficiency of this type of electric arc machine is higher than that secured from any other type of electric cutting and welding machines. The loss in power wasted is minimum. The alternating-current machine will deposit metal more cheaply than other types of electric or gaseous welders. Long arc cannot be drawn, which prevents metal spattering and being burned."



This Dial Tells the Story

as to the condition of your boilers. If scale is present the efficiency of a boiler is reduced and more coal and time are necessary to get up and maintain the proper steam pressure.

DIXON'S
Pioneer
Boiler Graphite

increases steaming capacity, reduces fuel consumption by making it possible to remove old scale.

The action of Dixon's Pioneer Boiler Graphite is purely mechanical. It is unaffected by acid in the water or heat generated in the boiler. The fine flakes of graphite simply work their way through the minute fissures in old scale and gradually penetrate between the scale and the metal. The scale thus loosened may be easily removed at less cost of time and labor.

Do not confuse Dixon's with ordinary Boiler Graphite.

Write for Booklet No. 75-T, "Graphite for the Boiler". It tells how and why Dixon's Pioneer Boiler Graphite will save you money in Boiler Room Maintenance.

Made in JERSEY CITY, N. J., by the
JOSEPH DIXON CRUCIBLE COMPANY
ESTABLISHED 1827

A Man Covering The Pacific Coast

Calling upon Shipbuilders, Supply Houses, etc., wishes to secure the Agency for Two or Three well-known Marine Specialties.

Address F. C. BREWER,
909 Eighth Avenue,
Seattle Washington

Generated on 2024-09-12 08:10 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

READY FEBRUARY 1ST

The Aldrich Marine Directory

1919 EDITION

Our 1918 MARINE DIRECTORY OF SHIPBUILDERS AND VESSEL OWNERS in the United States met such a long-felt want that we are publishing a new and enlarged edition which will be fully up to date.

Under Shipbuilders is a list of all builders, both of steel, wood, and concrete vessels, names of leading officials and necessary information regarding the size, capacity, etc., of each yard.

Under Vessel Owners are included names of leading officials, terminal points, dock superintendents, lists of vessels, etc.

Fully Indexed

Price $5 Postpaid.

MARINE ENGINEERING

6 EAST 39th STREET NEW YORK

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sensitized Papers are the subject of Catalogue H, just published by the New York Blue Print Paper Company, 102 Reade street, New York. "Our papers are the result of many years' experience and experiment in the production of sensitized papers. Compare our papers with others for strength and results, and also note how well they keep their printing qualities."

The Traveling Revolving "Hammerhead Crane," made by the McMyler Interstate Company, Bedford, Ohio, is described in Bulletin No. 40, which the company has just issued. "This crane may be so located as to serve two shipways, as is shown in the cut. The crane occupies very little ground area, the portal at the base providing sufficient clearance so that standard railroad cars may be run through the cranes without interference."

"The Advantages of a Hollow Bolt with the Durability of Ulster Special" are set forth in a circular issued by Joseph T. Ryerson & Son, Chicago, Ill. "Made from the original solid finished bar of identical Ulster Special that is standard for staybolts on majority of leading railroads—no change in process of its manufacture. Self-inspecting—hole perfectly round and true. Guaranteed not to split in threading or driving, which increases output and reduces shop cost. Will pass all railroad and other standard staybolt iron specifications. Furnished in lengths and sizes used; saves time and cost of cutting; eliminates crop ends and facilitates handling. Once tried the results will justify its continued use. Further information, price, delivery, etc., will be furnished on request."

Cleveland Wall Radial Drills are described by the Cleveland Punch & Shear Works Company, Cleveland, Ohio, in a catalogue just published. "The Cleveland wall radial drill is a drilling, reaming and countersinking machine adapted to steel fabricating shop use, and is especially valuable to structural iron workers, bridge builders, ship builders and boiler makers, it being designed to meet the requirements of modern structural fabrication. It has capacity to drill 1½-inch hole in cast iron or soft steel, has a wide range and can be operated easily and rapidly. The horizontal arm can be swung readily by hand, and is made in lengths from 6 feet to 20 feet, as required. The carriage is mounted on trolleys having roller bearings. The spindle is provided with a vertical travel of 8 inches or 12 inches as specified. For reaming and countersinking the drill is built with lever feed only and with hand wheel or automatic feeds with quick return for drilling. The lever feed is always included with the hand wheel feed, and the automatic feed includes both lever and hand wheel feeds. The No. 3 machines are equipped with power-raising and lowering device. The No. 1 and No. 3 machines can be furnished with either direct-connected motor drive or belt drive with countershaft, as desired."

The Star Improved Amsler Planimeter is described by the Star Brass Manufacturing Company, 104 East Dedham street, Boston, Mass., in a leaflet recently issued. "This instrument is one in which extreme care should be used in its manufacture and adjustment. All our instruments are completely manufactured by ourselves in our own works, and are thoroughly tested and corrected before shipment to customer. The planimeter is used to measure the area of any plain surface, whatever the outline may be. Persons who do not understand mathematics are easily able to use it, and with a little practice in following the lines of the surface are able to arrive at accurate results much more quickly and accurately than a skillful mathematician employing ordinary arithmetical calculations. As now made, the figures on roller wheel and vernier are black on a permanent white background, which makes them very clear and legible. The planimeter, in general terms, consists of two metallic arms or bars hinged together at one end. One arm carries a needle-point at its free end and acts as a pivot for the instrument. The other arm carries a tracer point with which to trace the outline of any figure or diagram to be measured. Near the hinge is a roller-wheel on which the instrument moves, carrying a disc graduated to record the area traced about by the point. The instrument shown above is known as the No. 1 style, and represents the planimeter in its simplest form, as designed to measure areas in square inches and decimals of a square inch; it has but one wheel, the figures on which represent units, the intermediate graduation tenths, and the vernier gives the hundredths. One complete revolution of the roller-wheel represents an area of ten square inches measured, and is its normal limit of measurement, but larger areas may be measured by adding ten units to the reading for each complete revolution of the roller-wheel."

FOR SALE

Triple Expansion Marine Engine 18″ x 32″ x 54″—42″ stroke, complete with jet condenser. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾″ stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

YOUR ILLUSTRATING, CATALOGS AND BOOKLETS

promptly completed in first-class manner by experienced advertising man who has specialized on mechanical subjects fifteen years. Complete service, including writing, designing and printing. No order too small.

Roland C. Wallower, 39 Cortlandt St., New York City

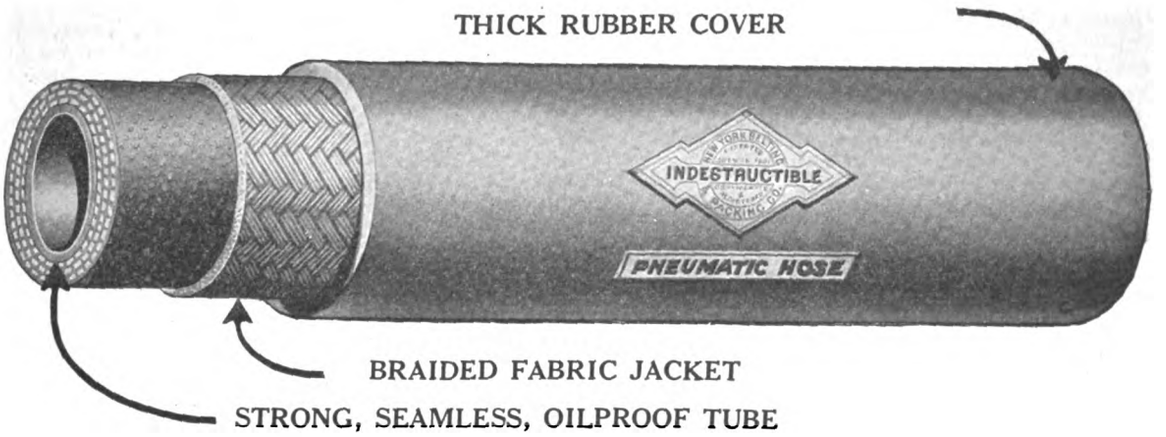
For Sale
IMMEDIATE DELIVERY
A PAIR OF 150-175 H. P. 6 CYLINDER CRAIG-DIESEL MARINE OIL ENGINES
Cox & Stevens
15 William Street **New York**

Cumberland Shipbuilding Co.
SHIPBUILDING AND REPAIR PLANT
SOUTH PORTLAND, MAINE
Telephone 6936

Builders and repairers of all types of wooden vessels.

New Marine Railway of 2,500 tons capacity. Inquiries solicited for estimates, costs and dates. Most modern shipbuilding plant on the Atlantic Coast, with every facility for expeditious work. Most accessible harbor on the Coast.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



WRITE FOR SAMPLE

When you have tried other kinds of air hose and found them lacking in essential requirements, equip your tools with

"Indestructible--" Pneumatic Tool Hose

Strength is its inherent quality—will positively not kink—the thick, tough rubber cover stands the constant dragging over rough places. The heavy, seamless rubber tube is proof against injury from oil which is bound to get into your air lines. The braided jacket is a giant in strength.

Delays caused by inferior hose will be unknown when you are equipped with "Indestructible" Pneumatic Tool Hose.

LIGHT — FLEXIBLE — STRONG

New York Belting & Packing Co.

NEW YORK . . 91-93 CHAMBERS STREET

CHICAGO . . 124-126 WEST LAKE STREET
ST. LOUIS . . 218-220 CHESTNUT STREET
SAN FRANCISCO . . 519 MISSION STREET
PITTSBURGH . . . 420 FIRST AVENUE
PHILADELPHIA . . 821-823 ARCH STREET
BOSTON . . . . . 65 PEARL STREET

NEW YORK BELTING & PACKING CO. FOUNDED 1846 INCORPORATED 1856

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The "Red Devil" Rivet Cutter is described by the Rice Manufacturing Company, Fletcher Savings & Trust building, Indianapolis, Ind., in a 32-page illustrated booklet just published. "The 'Red Devil' rivet cutter is a tool which has been successfully developed over a period of years by practical steel car men co-operating with a manufacturer of wide experience in this field. While the principle is simple—that of a plunger driven in a long barrel by compressed air, striking a chisel head—the amazingly hard blows which it strikes are due to the 'Red Devil' method of construction. These exclusive features allow every ounce of air to do full duty. The 'Red Devil' is successful because of the tremendous power which it puts into every blow. These terrific blows will cut 1¼-inch rivets—cold—in an average of ten seconds. One-inch rivets are cut out in from three to five blows. The operation of the 'Red Devil' is simplicity itself. Only three men are necessary to operate the tool. The operator takes hold of the left side handle with his left hand, and rocks the valve handle with his right. Another man holds the right-side handle, while the third holds the chisel on the rivet. Turning the valve handle up opens the air port, which instantly permits the full force of the air to act on the plunger—driving it down the barrel and striking the chisel head. The valve handle is then thrown down to exhaust, and the plunger returns to the head of the tool ready for the next blow. A very little experience will enable the operator to strike light or heavy blows at will. When the rivet is nearly off a light blow can be struck."

Moore's Launching Grease is described in a circular published by the Moore Oil Company, Cincinnati, Ohio. The circular states that this grease is made from finest fats, thoroughly saponified, in order to give proper melting point. It is not affected by heat or cold, is of the right consistency and can be easily applied. It is said to be greasier and to go farther than tallows, stearines or soaps. "Our grease does away with the use of linseed, flaxseed or oil for starting; the ways will remain smoother, because the friction is reduced to the least possible minimum."

"Economical Handling of Coal and Ashes" is the title of Book No. 353, just published by the Link Belt Company, Chicago, Ill. This is a profusely illustrated book of 52 pages, from which we quote as follows: "The modern power plant contains much equipment which is the result of real engineering genius, but it is only recently that the boiler room has begun to receive the attention which it deserves. The development of the electric generator, the steam turbine and the various accessories, has proved a greater attraction to inventive genius than the more prosaic problems of fuel saving and labor saving in the boiler room. As a matter of fact, however, these boiler room savings probably offer greater possibilities than further savings in the generator room."

Small Tools are described and illustrated in Cleveland Hand Book No. 6, just published by the Cleveland Punch & Shear Works Company, Cleveland, Ohio. "By standardizing the sizes of tools as described in detail in the Cleveland system on pages 4 to 7, we are able to fill your orders promptly from stock and at a cost much less than for special tools. Even if you are satisfied with your present arrangement you should become acquainted with this system. Every punching machine should be adapted to use standard tools, both from the standpoint of economy and service. This can readily be done at small cost in the majority of cases by enlarging the bore of the present coupling nut or purchasing a new coupling nut and by shortening or lengthening the punch stem, if need be. We also carry in stock punches and dies for screw punches and portable hand punches, and also the Pratt and Whitney and Richards systems shown on pages 10 and 11. We have had years of experience in manufacturing the tools shown in this handbook, and are constantly experimenting with various steels and processes so as to always give our customers the best."

Cargo Hoists.—Perhaps no work on shipboard requires a better quality of rope than that used in hoisting the cargo from the holds. The constant bending of the rope around the small radius pulleys in the blocks, while the rope is under heavy strain, has a tendency to break the fibers unless the rope has been specially made for use under these conditions. The constant use of the rope in this way generates heat, which, unless it escapes, tends to cause the fiber to deteriorate. Plymouth Manila Best Fall, made by the Plymouth Cordage Company, North Plymouth, Mass., is a rope made to overcome these conditions. It is described in a recent issue of *Plymouth Products*, which is published by the Plymouth Cordage Company, and a copy of which will be sent to our readers upon request.

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

HYDE WINDLASS COMPANY
BATH, MAINE
Manufacturers of
Windlasses, Steering Gears
Winches, Capstans
Hand, Steam and Electric
Bronze and Iron Propellers
8 in. to 20 ft. in diam.

OVER
350 VESSELS
(NOW BUILDING)
WILL CARRY
PROPELLERS
DESIGNED BY
THE AMERICAN SCREW PROPELLER CO.
1326-28 CHESTNUT ST., PHILADELPHIA, PA.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Forging Presses are described in Bulletin F, issued by the United Engineering & Foundry Company, Pittsburgh, Pa. "Practically every large forge plant in the United States is now equipped with 'United' high-speed steam hydraulic forging presses. We have a number of 1,000- and 1,500-ton presses for prompt delivery."

"Small Tools" is the title of Catalogue 40, just published by the Greenfield Tap & Die Corporation, Greenfield, Mass. This is a very complete and profusely illustrated catalogue of 288 pages. It lists the company's line of taps, dies, screw plates and reamers. The other tools which the company makes, such as pipe tools, machine tools and gages, are taken care of in separate catalogues, a copy of any one of which will be sent to our readers upon request.

The Milliken Bros. Manufacturing Company, Inc., Woolworth building, New York, has just published an illustrated book entitled "Space and Speed in Steel Buildings," giving a description of the "Standardized Truss Unit System" of building construction, designed and manufactured by the company. This system of erection is said to be suitable for all classes of industrial and manufacturing buildings, making use of a simple, common structural steel unit, both for columns and trusses. No plans are necessary, and the buildings are either permanent or portable. The system makes possible low transportation and erection costs. The book shows a number of interesting halftones, illustrating different buildings of this type constructed for the United States Government. Copies may be obtained free from the company by those interested.

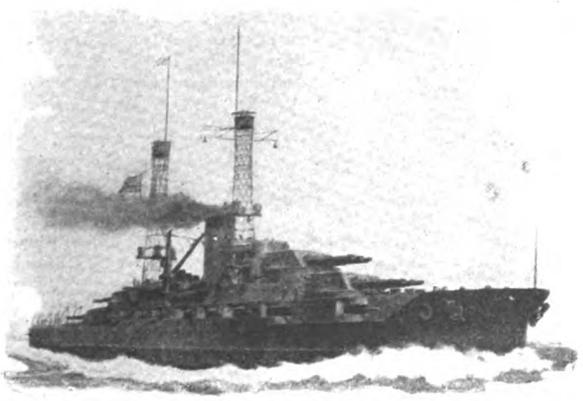
Marine Copper Work is the subject of circulars published by E. B. Badger & Sons Company, 63 to 75 Pitts street, Boston, Mass. This company has had seventeen years' experience in designing and manufacturing all kinds of marine copper work, such as copper pipe bending, seamless copper air chambers, copper expansion joints, both high pressure and low pressure, and special copper work of all kinds.

Fireproof Ventilating Flooring is the subject of Catalogue IA10, issued by the Irving Iron Works Company, Long Island City, N. Y. "A metallic flooring with 80 percent lighting and ventilation. Think of that! All the strength and rigidity of solid metal floor plates, with 80 percent opening for light and air. Think of the comfort, the higher efficiency of the men below. And it's just as good for the man on top—comfortable, non-slipping, safe, easy to walk on. Where do you need these advantages in your construction?"

Jeffrey Belt Conveyors are described in a catalogue issued by the Jeffrey Manufacturing Company, Columbus, Ohio. "This new catalogue can rightfully be termed a complete textbook upon the belt conveyor. Although compiled essentially for the purpose of promoting the advantages of using the Jeffrey belt conveyor, the purchaser's requirements for information upon those elements in the application of the belt conveyor which mean for satisfactory service, have been thoroughly covered in every detail. The best in belt conveyor practice has been collected and printed in this catalogue, the scope of which may be gathered from the subjects, presented in a style both interesting and instructive."

The Multiwhirl Cooler, designed for the cooling of lubricating oil for main turbine bearings, to insure a uniform low temperature and to permit the continued use of a given quantity of oil, is described in a circular published by the Griscom-Russell Company, 2124 West Street building, New York. "The cooling water is in the tubes. The oil passes through the shell, and is brought into intimate contact with the cooling surface by means of the helical baffle. This baffle directs the flow of the oil without appreciably retarding its passage, with a resultant low pressure loss. An outside packed head eliminates all internal tube joints and prevents any possibility of water leaking into the oil. The high rate of heat transfer permits of a very compact unit."

The Terry Turbine is the subject of Bulletin 242, published by the Terry Steam Turbine Company, Hartford, Conn. "The Terry Turbine occupies a pre-eminent position in its field. Fifteen years ago it was a pioneer—and it still maintains its leadership. For auxiliary drive in the two most exacting fields—the United States navy and the merchant marine—it is the accepted standard of efficiency. In every type of plant, large and small, ashore and afloat power, the Terry is being extensively used for all classes of service. Ever since it was first put on the market the aim has been toward perfection in design and construction rather than minimum first cost. High operating efficiency, long life and low upkeep cost have been considered of more value than low price. The unchallenged position of the Terry to-day is conclusive evidence of the wisdom of this policy."



Copyright by E. Muller, Jr., N. Y.
U. S. S. PENNSYLVANIA

Pathfinder to the Fleet on the Epoch Making Voyage of our President

America's Proud Super-Dreadnaught
THE PENNSYLVANIA
is navigated by

The Sperry Gyro-Compass

An instrument perfected through long efforts and the splendid cooperation of the officers of the U. S. Navy and now standard for the navies of the world.

Why should not every ship be similarly safeguarded by *the latest achievement in Navigational Equipment,* of proved reliability, of high precision and dealing with absolute geographical north?

Rough weather would not have interfered with the President's voyage, had the ship been provided with a

Sperry Gyro-Stabilizer, which prevents all rolling

THE SPERRY GYROSCOPE COMPANY

Works and Home Office
BROOKLYN, NEW YORK

Main European Office
LONDON, ENG.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Dixon's Boiler Graphite is the subject of Bulletin 75-T, published by the Joseph Dixon Crucible Company, Jersey City, N. J. "Dixon's Pioneer Boiler Graphite increases steaming capacity, reduces fuel consumption by making it possible to remove old scale. The action of Dixon's Pioneer Boiler Graphite is purely mechanical. It is unaffected by acid in the water or heat generated in the boiler. The fine flakes of graphite simply work their way through the minute fissures in old scale and gradually penetrate between the scale and the metal. The scale thus loosened may be easily removed at less cost of time and labor. Do not confuse Dixon's with ordinary boiler graphite. Write for booklet No. 75-T, 'Graphite for the Boiler.' It tells how and why Dixon's Pioneer Boiler Graphite will save you money in boiler room maintenance."

Marine Lighting and Signaling Apparatus is described in an illustrated catalogue just issued by the Benjamin Electric Manufacturing Company, Chicago, Ill. "The name 'Benjamin' on marine lighting and signaling apparatus insures an elasticity of service never before possible. For the Benjamin line is thoroughly interchangeable. The Benjamin Junction box, for instance, is tapped to accommodate any Benjamin marine receptacle, connecting block, switch, etc. Changes in the character of service required from any outlet can be made instantly by simply substituting the necessary parts. And Benjamin plugs will make contact in any Benjamin screwbase receptacle. Benjamin apparatus has the unqualified endorsement of the Board of Underwriters and of well-informed marine engineers."

Albany Grease is described by Adam Cook's Sons, Inc., 708 Washington street, New York, in a circular recently issued. "Albany Grease has given a lubricating service of great efficiency and economy on marine engines and other marine mechanical equipment, not only on board ship but in shipbuilding plants, drydocks, and repair yards. It is considered the most universally used lubricant in the marine field. Albany Grease has been used by marine engineers for the past half century with very highly satisfactory results. It can be used successfully on the bearings of all marine equipment. Absolute dependence can be placed on Albany Grease at all times. If you are not using Albany Grease now send for samples. Why not do it—now?"

Radio Sets are described by the Kilbourne & Clark Manufacturing Company, Seattle, Wash., in a bulletin recently published. "When your ships go into drydock for repairs that might have been avoided by prompt communication, who pays the bill? When your ships log useless miles, who pays the bill? When your vessels arrive in port needing repairs for which you are unprepared, who pays for the time lost? When your ships lose the chance to pick up salvage worth hundreds of thousands, who is the real loser? When your ships lay-to and wait for days for a tow, who pays the bill? Isn't it you—the owner—that suffers these losses? With a small initial outlay for a Kilbourne & Clark radio set all these losses would be avoided. It costs scarcely nothing to operate a 'K-C' set. You buy the apparatus outright. The first cost is the last. After that each set starts to make money for the shipowner."

"Aberthaw Construction Service" is the title of a book published by the Aberthaw Construction Company, 27 School street, Boston, Mass. "Whatever your requirements for shipyard building or water-front development, whether the work is to begin now or later, we are ready. An experience covering some of the largest war-time projects, a large permanent organization built up during twenty-five years of active practice, an equipment to meet any requirement—all these are at your service. They make possible the completion of your work with expedition and economy and to your absolute satisfaction. How we organize and manage construction work is clearly explained in our book 'Aberthaw Construction Service.' You should read it before entering upon your new work."

Intercommunication and Signal Equipment for Ships is the subject of Treatise No. 1, published by Department A-2 of the Industrial Division of the Klaxon Company, 33 West Forty-second street, New York. "The war is over, but the hazards of the sea have not passed with it. The dangers incidental to water transportation are fundamental and will continue as threatening as ever before, augmented, for some time to come, by the presence of floating mines, etc. Supplementing the need for protection of lives and property there will now arise a strong demand for the utmost economy in the operation of ships. In connection with such problems of increased protection and economy we wish to call your attention to the Klaxon intercommunication and signal systems. These systems are fully described in our Treatise No. 1, which we will be glad to forward you."

Armco Iron Welding Rods meet United States Government needs, according to a circular published by the Page Steel & Wire Company, 30 Church street, New York. "The Emergency Fleet Corporation specifications demand that welding wire shall contain not over .18 percent of carbon, .55 percent phosphorus, .5 percent sulphur, and .08 percent silicon, and that the wire be of uniform homogeneous structure, free from segregation, oxides, pipes, seams, etc., as proven by micro-photographs. Armco iron welding wire has been tested by the Emergency Fleet Corporation for use in its work and far more than complies with the above specifications. Comparison of chemical composition with these specifications shows that even if Armco iron welding rods had fifteen times as much carbon, nine times as much phosphorus, eighteen times as much manganese, eighteen times as much sulphur, and twelve times as much silicon, as they actually do contain, they would still pass the specifications with a liberal margin. Armco iron welding rods are the Page Steel & Wire Company's answer to demands for the all-American product—provided by American resources and American ingenuity—to replace the imported. Page ideals demand square and unequivocal support of the United States Government, now and always. National service and 100 percent Americanism have therefore led us to give over as much and as freely of our plants as the Government desires—and the indulgence which we must ask of our customers temporarily will be well repaid by the progressive improvement and bettered service which we will offer when normal conditions are restored."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

AMERICAN ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 308 Vine St., Camden, N. J.

THE AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 5921 Walnut St., Philadelphia, Pa.
Vice-President—W. A. Leavitt, Jr., New York Shipbuilding Corporation, Camden, N. J.
Secretary—B. G. Barnes, 1596 North Ave., Bridgeport, Conn.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.

MARINE ENGINEERS' BENEFICIAL ASSOCIATION NATIONAL OFFICERS
National President—Wm. S. Brown, 856 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 856 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Bienville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

INSTITUTE OF MARINE ENGINEERS, INCORPORATED
The Minories, Tower Hill, London

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

Ship Draftsman with selling experience desires sales agency for marine supplies and specialties. Address *Box* 70, care of MARINE ENGINEERING.

Wanted—Marine Engineers, Engine and Electrical Draftsmen, Superintendents for Fitting-Out and Machine Shops. Permanent positions for right men in shipyard near New York City. Address *Box* 97, care of MARINE ENGINEERING.

Wanted—Chief Hull, also Chief Engine Draftsman, familiar with designing, calculating, etc. Permanent position. Write or wire *Box* 9-*B*, care of MARINE ENGINEERING.

For Sale.—1,000 to 1,200 pieces Iron Boiler Tubing, 60 inches long and 2⅞ inches inside diameter. Will be sold at a bargain. Address *Box* 1184, City Hall Station, New York.

Draftsman—Hull Work. Technical graduate in naval architecture; six years' drafting, inspecting and estimating experience, desires position in shipyard as leading draftsman or estimator. Apply *Hull Draftsman*, care of MARINE ENGINEERING.

First-Class Marine Draftsman and Checker, at present in charge of joiner and carpenter work and inspector of fabricated woodwork, desires position in like capacity or as production engineer or Government inspector. Am a young man of broad experience, graduate of several American and foreign technical schools, 12 years' experience in steel and woodworking, 3 years as efficiency expert. What can you offer me? Address *Marine Draftsman*, care of MARINE ENGINEERING.

Naval Architect and Superintending Engineer of steel and wood yard desires change. Shipbuilding education; practical experience all branches; licensed marine engineer; no dependents. Prefers unusual experience and large chances to salaried position. Address *Box* 594, care of MARINE ENGINEE.ING.

Production Engineer—Exceptional analytical and executive experience in rate fixing, planning dispatching of men and materials, progress control predetermined and actual costs as applied to a shipyard. Address *Production*, care of MARINE ENGINEERING.

Executive Engineer, experienced in entire charge of hull and machinery, plant layouts and equipment, superintendence and erection. Good references; go anywhere. Responsible position only. Address *Box X*, care of MARINE ENGINEERING.

For Sale—Tug W. H. Williams. Iron hull, 90′ x 19′ x 10′; boiler, 10′ 6″ x 12′ 6″; engine, 15 x 28 x 22; bunker capacity, 25 tons. Equipped with condenser, steam steering gear, two steam capstans; electric lights throughout. Entirely rebuilt in 1917 and in first-class condition. Address *Tug*, care of MARINE ENGINEERING.

Marine Superintendent-Foreman desires position. Can give good reasons for desiring change and reference. Now in the West Indies; was before chief engineer; 16 years' experience, working in shipbuilding and machine works. Speaking the French, English, Spanish and Holland languages. Have first citizen papers. Address *Box* 605, care of MARINE ENGINEERING.

For Sale—Full set of working shop drawings of 24 inches by 36 inches, four-cylinder, two-cycle, single-acting fuel-oil engine. About 80 sheets complete for building engine in four months; 1,450 horsepower; suitable and specially designed for Shipping Board vessels; mechanical atomization, marine Marshall reversible valve gear; 60 percent cut-off each for oil and compressed air starting without dead centers; no loose levers, cams or springs; complete control by marine handling levers; write for drawing. Address *Box B* 6, care of MARINE ENGINEERING.

Graduate Naval Architect seeks position as naval architect and secretary of small shipyard, or sales engineer for marine manufacturer. American; age 29; in perfect health. Industrious, resourceful, loyal, tactful. Eight years designer, estimator, executive. Successful business and sales record. Now employed, but desires broader field of service. Address *Box* 507, care of MARINE ENGINEERING.

A Renewable Extra Heavy Bronze Globe and Angle Valve is described in a circular issued by the Star Brass Manufacturing Company, 104 East Dedham street, Boston, Mass. "Some of our special features are enumerated below: All castings of our special bronze mixture, made from metal patterns on pneumatic molding machines. All parts made with special tools, insuring absolute uniformity. Body of a special rugged design; steam is not retarded in its flow owing to body's form—it is so designed that metal is distributed where most needed for severe use. Seat and disc are both renewable and extra heavy; the bevel or taper of both are at a sharp angle, with a very light bearing, insuring less liability of foreign matter lodging on seat when valve is closed, also less chance of wire drawing and cutting. Seat rings are of a patented form with special taper seat where screwed in body. This design insures a perfect joint and absence of liability to distortion from lack of care in installation or unequal expansion in use. The bonnet is novel in design, having many unique features. First, it is absolutely self-draining, thereby eliminating all liability to freeze when used in cold positions; has extra large and deep packing space, gland and nut; long thread in body, insuring strength and tightness. Stems, or spindles, are extra heavy, made with large Acme quick-opening threads. Valves can be repacked under pressure when wide open, as top of disc seats against bottom of bonnet, making steam-tight joint. Hand wheel is fastened to stem with hexagon nut, and can readily be removed and replaced. For extreme high temperatures and pressures, or where the water is such as to cause a scaling or corrosive action, we furnish, when specially ordered, seats and discs of our special nickel mixture."

CHIEF ENGINEER

of one of the largest structural fabricating plants in the South desires permanent connection with large shipbuilding plant or large construction company doing war work. He is also manager of an engineering firm doing consulting work for industrial plants, bridges and miscellaneous steel and reinforced concrete structures. He is 36 years of age, married, graduate civil and mechanical engineer, and has had over 15 years' broad experience managing and engineering large undertakings; is familiar with finance, accounting and efficient organization. Has been connected with the U. S. Government over three years. Salary $9,000 to $12,000 per year, depending on scope of work. Address, Box 215, care of Marine Engineering

WANTED

Bound Volumes of

MARINE ENGINEERING

for the years 1912-13-14-15-16-17

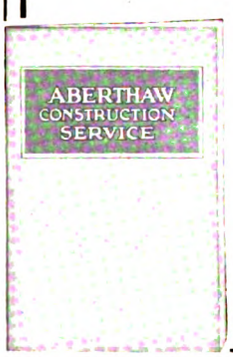
Address, giving price asked,

***"E. L. S.,"* care of MARINE ENGINEERING**

Generated on 2024-09-12 08:13 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

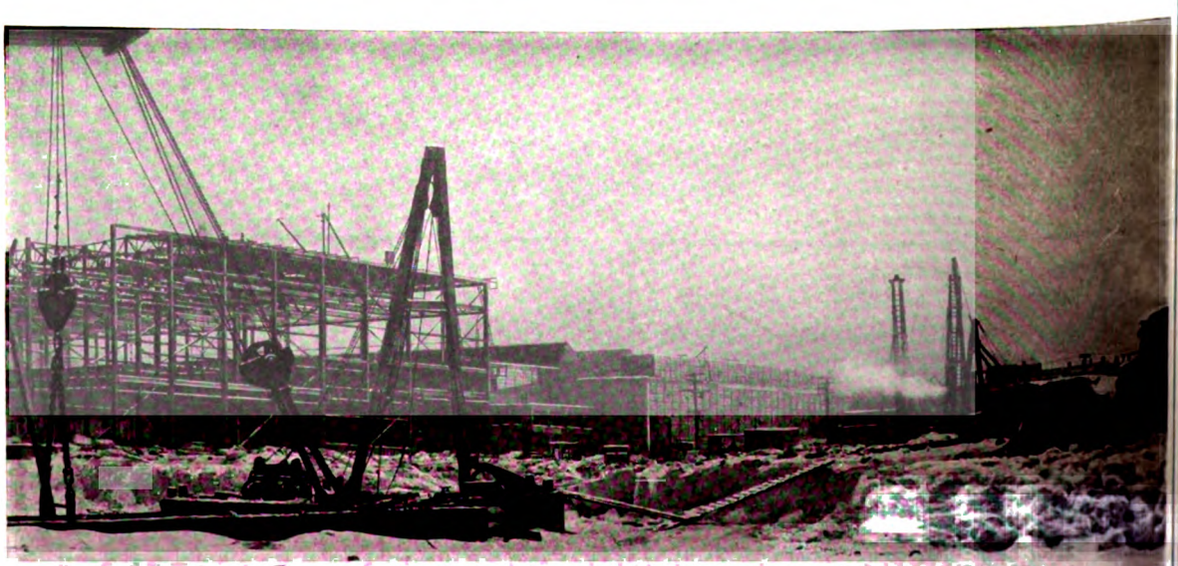
ABERTHAW IS READY

WHATEVER your requirements for shipyard building or waterfront development, whether the work is to begin now or later,—we are ready. An experience covering some of the largest war-time projects, a large permanent organization built up during twenty-five years of active practice, an equipment to meet any requirement—all these are at your service. They make possible the completion of your work with expedition and economy and to your absolute satisfaction.



How we organize and manage construction work is clearly explained in our book "Aberthaw Construction Service." You should read it before entering upon your new work.

ABERTHAW CONSTRUCTION COMPANY
BOSTON MASSACHUSETTS



When writing to advertisers please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

This table shows the Monthly Coal Saving, in Dollars and Cents per 100 feet of pipe *by using* "85% Magnesia" Pipe-Coverings

Size of Pipe Inches	5 lbs. Steam Pressure	10 lbs. Steam Pressure	50 lbs. Steam Pressure	100 lbs. Steam Pressure	150 lbs. Steam Pressure	200 lbs. Steam Pressure	200 lbs. Steam Pressure 100° Sup-Heat
½	$1.44	$1.58	$2.20	$3.28	$3.66	$4.11	$6.80
¾	1.72	1.89	2.87	3.70	4.26	4.89	8.03
1	2.11	2.30	3.56	4.80	5.35	6.04	10.00
1¼	2.52	2.74	4.22	5.52	6.50	7.25	12.20
1½	2.86	3.10	4.73	6.14	7.29	8.17	13.70
2	3.53	3.74	5.86	7.63	8.93	10.11	16.80
2½	4.25	4.39	6.95	9.07	10.55	11.90	19.90
3	5.00	5.33	8.30	10.90	12.60	14.30	23.82
3½	....	6.22	9.60	12.40	14.40	16.32	27.23
4	....	7.06	10.60	14.05	16.40	18.40	30.85
4½	....	7.69	11.80	15.35	17.92	20.25	34.00
5	....	8.64	13.16	17.20	20.00	22.72	38.00
6	....	10.15	15.60	20.38	23.82	26.88	44.90
7	....	....	18.38	23.68	27.60	30.80	52.00
8	....	....	20.40	26.60	31.20	34.90	58.55
9	....	....	22.70	29.00	34.52	38.61	64.80
10	....	....	25.00	32.70	38.40	43.08	72.40
Boilers and flat surfaces per 100 sq. ft. 1¼ in. thick	5.26	5.67	8.80	11.50	13.48	15.12	25.44

FACTS are enlightening things. For the man who doesn't see how it is that "85% Magnesia" pipe and boiler coverings save their cost many times over, *here are the figures.*

They are conservatively based on the most exhaustive series of tests ever made. These tests extended over more than a year. They were conducted by the Mellon Institute of Industrial Research, a scientific institution of the highest standing, which certifies their absolute correctness.

What Will "85% Magnesia" Save You?

We ask your special attention to the fact that these savings are *per hundred lineal feet of pipe per month.* To find the actual saving for your own steam plant you must *multiply* this monthly saving by the number of hundreds of feet of steam pipe you have. To find the total saving for a full year, you must again multiply this figure by *twelve.*

Then you will know the exact coal-saving efficiency of "85% Magnesia."

We ask you to make these figures personal. They apply to *you* equally with every other coal user in the country. They cannot be controverted. The need for fuel economy is *yours.* Equally, the means for saving by the use of "85% Magnesia" coverings are at *your* disposal.

Ask Yourself These Important Questions:

Am I saving all the coal I can?

Are my pipes and boilers properly covered with the most efficient heat-saving insulation? Is it "85% Magnesia"?

The cost of thorough protection by "85% Magnesia," against heat losses, will repay itself, not in years but in *months.* It will continue to save indefinitely, not only in the actual money cost of coal but also by greatly increased *efficiency* in the operation of your steam plant, whether it be used for heating or power.

The National Coal Saver

The value of "85% Magnesia" as a conserver of heat and saver of fuel is demonstrated by the fact that for over thirty years it has been the official standard of the U. S. Navy. During this same period it has been the choice of the leading power and heating engineers of the country and of the leading railroads and steamship lines. It is endorsed and approved by the U. S. Fuel Administration and the U. S. Shipping Board.

The World-War of Industries

The coming economic world-struggle will be purely one of industries. The best equipped factories, with the lowest cost of production and the greatest economy of operation, will be the most successful. The basis of all industry is *coal.* To save coal is one of the mightiest steps towards industrial supremacy.

Copies of this table will be sent free on request. The members of the Magnesia Association will gladly furnish further information if desired, on this vital subject of heat insulation. If you are an engineer or architect, ask also for the Specification for the proper application of "85% Magnesia," compiled and indorsed by the Mellon Institute of Industrial Research and issued by the

MAGNESIA ASSOCIATION *of* AMERICA

721 Bulletin Building, Philadelphia, Pa.

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman.* George D. Crabbs, The Philip Carey Co., Cincinnati, Ohio. Alvin M. Ehret, Ehret Magnesia Mfg. Co., Valley Forge, Pa. J. R. Swift, The Franklin Mfg. Co., Franklin, Pa. R. V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Pa.

Generated on 2024-09-12 08:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

First Warrior River Cargo En Route to New Orleans

That utilization of the Warrior River, as planned by the Federal Railroad Administration, has actually been brought about is indicated by the recent landing of the first consignment of coal from the Alabama fields at Mobile. Here it was transferred to one of the self-propelling barges and sent on to New Orleans. The 2,250 tons brought down in five barges were towed by the steamer *Volcano*.

Guns Removed from Merchant Marine

The return of merchant vessels to peace conditions is evidenced by the removal of guns and gun platforms from ships as they arrive at their home ports from overseas, and the transfer of the gun crews back to naval duties, now going forward under the direction of the Shipping Board.

Bethlehem Shipbuilding Corporation Signs Agreement With Labor Unions

Seventy-five thousand members are affected by the contract of the Bethlehem Shipbuilding Corporation, a Schwab company, which recognizes the labor unions. The details of the contract were modeled somewhat on the plan worked out in settlement of the Bridgeport cases. Wages are not touched in the articles of the agreement, since the recent award of the Shipping Board's wage adjustment commission continues in effect.

Battleship Massachusetts "Out of the Running"

The battleship *Massachusetts*, which was built at Cramps in Philadelphia, and began actual service in 1896, it is understood will shortly be placed out of commission. It is the second oldest vessel of her class in the navy. Whether the vessel will be dismantled or scrapped, or assigned to some passive roll, has not yet been announced.

Largest Wood Craft Launched

With the launching of the 4,000-ton wood steamship Blakeley recently the Puget Sound Bridge and Dredging Company put the largest wood craft so far built in Seattle, as well as their first vessel for the United States Shipping Board, into the waters of Elliott Bay.

National Motor Boat Show to Be Omitted This Year

In view of the conditions now confronting the motor boat industry, the executive committee of the National Association of Engine and Boat Manufacturers has decided to suspend the holding of the National Motor Boat Show for this season.

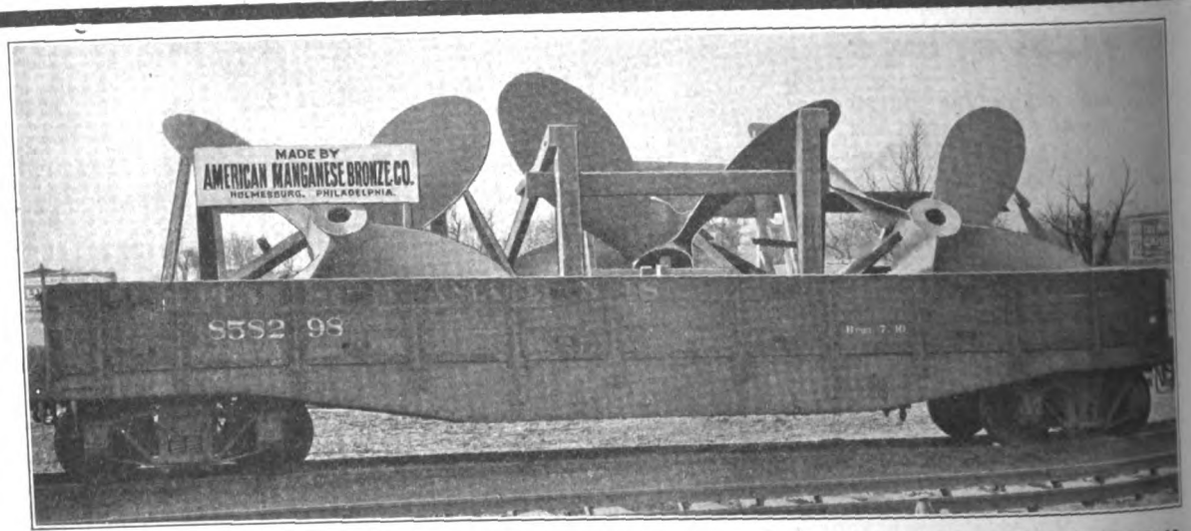
The association is endeavoring to obtain either an elimination or revision of the taxes that are at present incorporated in the proposed new revenue act. Present difficult transportation, including both freight and express shipment, is receiving consideration by the association, and the facts will be brought to the attention of the Railroad Administration in the near future.

First Concrete Ship Launched at Gloucester, England

Although commonly regarded as an inland city, Gloucester, England, possesses a dock system with a water area of about 12½ acres, and is in communication with the Bristol Channel by means of the Gloucester and Berkeley ship canal. On the left bank of this waterway is constructed the concrete shipbuilding yard of the Gloucester Ferro-Concrete Shipbuilding Company, working on the Mouchel-Hennobique system of construction. Of the four vessels first laid down, one was launched on November 23 without a hitch, the *Creterock*, a sea-going barge of 1,000 tons deadweight capacity, built for the Controller-General of Merchant Shipbuilding, in accordance with the structural designs of Messrs. L. G. Mouchel & Partners, of Westminster. Since the ship canal is not of sufficient width for launching vessels end on, the yard has been arranged for side launching, a somewhat unusual method in England.

Largest Steel Cargo Vessel Launched

What is said to be the largest steel cargo craft built in the United States since the inception of the emergency shipping programme, was recently launched at the Sun Shipbuilding plant at Chester, Pa. The craft is a steel steamship of 13,600 tons, originally ordered for the account of the Luckenbach Steamship Company of New York, but later commandeered by the Government, and when completed will be delivered to the Emergency Fleet Corporation.



"MANGANESE BRONZE PROPELLERS"

Have been made by us for the following well known concerns

American International Shipbuilding Corp.
Baltimore Dry Dock & Shipbuilding Company
Bethlehem Shipbuilding Corporation
Canadian Vickers, Ltd.
Federal Shipbuilding Company
Manitowoc Shipbuilding & Dry Dock Company
Newport News Shipbuilding & Dry Dock Co.
New York Shipbuilding Corporation
Norfolk and Washington Steamship Company
Pocahontas Fuel Company
Pusey and Jones Company
Red "D" Line of Steamships
Standard Shipbuilding Corporation
Standard Motor Construction Company

Be Convinced, Write for Pamphlet "C".

AMERICAN MANGANESE BRONZE CO.

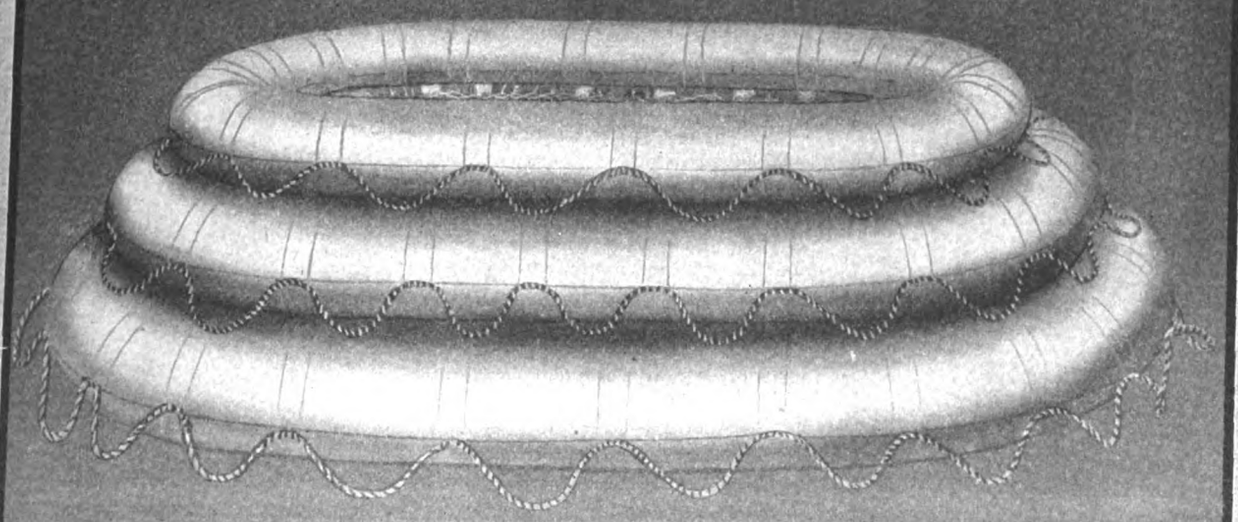
Holmesburg, Philadelphia, Pa.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats	Metallic Cylinder Life Rafts
Lundin Motor Lifeboats	Mills' Releasing Gear
Welin Quadrant Davits	A. B. C. Life Rafts
Norton Sheath Screw Davits	A. B. C. Life Preservers
Standard Metallic Lifeboats with "Steel Keels"	A. B. C. Ring Buoys
	Welin Gripe Release
Compensating Quadrant Cranes	Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. 50 E. 42nd Street, New York

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Japan's Shipbuilding Programme for 1919

One of the local Japanese shipping offices has just received a statement of Japan's shipbuilding programme for 1919, or, to be exact, from November, 1918, to October, 1919:

Builders	No. of Ships	Deadw't Tonnage
Kawasaki Dock Yard	37	333,000
Osaka Iron Works, Osaka	9	83,000
Osaka Innoshima Branch	8	74,000
Mitsuibishi Shipbuilding Co., Nagasaki	10	74,300
Mitsuibishi Shipbuilding Co., Kobe Branch	6	33,500
Uraga Dock Co.	12	91,260
Asano Dock Yard	10	88,000
Harima Dock Co.	8	67,500
Yokohama Dock & Engineering Co.	9	58,200
Mitsui & Co., Shipbuilding Department	7	45,000
Uchida Shipbuilding Co.	5	34,000
Ishikawajima Dock Yard	6	30,000
Nitta Shipbuilding Co.	7	25,600
Osaka Shipbuilding Co.	8	24,000
Asahi Dock Yard	4	22,000
Others	35	105,125
Total	181	1,189,285

JAPANESE CONTRACTS FOR AMERICAN SHIPS

Builders	No. of Ships	Deadw't Tonnage
Asahi Dock Yard	1	5,500
Fujimagata	1	6,300
Harima Dock Co.	2	15,500
Ishikawajima Dock Yard	2	10,000
Kawasaki Dock Yard	5	45,000
Nitta Shipbuilding Co.	1	5,500
Yokohama Dock & Engineering Co.	3	18,900
Asano Dock Yard	2	25,200
Uraga Dock Co.	3	19,950
Mitsui & Co., Shipbuilding Department	2	18,200
Mitsuibishi Shipbuilding Co., Nagasaki	2	16,800
Uchida Shipbuilding Co.	2	17,000
Osaka Shipbuilding Co.	4	42,000
Total	30	245,850

Society of Automotive Engineers' Winter Meeting

On February 4, 5 and 6 the Society of Automotive Engineers will meet to discuss reconstruction problems. Of special interest to marine engineers will be the address by Dr. Joseph E. Pogue, of the Bureau of Oil Conservation of the United States Fuel Administration Bureau, on the interpretation of the engine fuel problem. A paper on better truck performance, by Major Arthur B. Browne, is also scheduled. Papers on tractors and tanks will probably for the first time bring out a number of new engineering features incorporated in these new types of war apparatus, which may be applicable to other phases of commercial practice. The standards committee of the society is also reported to be including interesting details in its report. All meetings of the society will be held at Madison Square Garden, New York City.

Proposed Subsidies for Argentine Shipbuilders

President Irigoyen has submitted a new project of law relative to the encouragement of shipbuilding in Argentina. This industry has not heretofore received any special aid from the State, and the proposed legislation is intended to afford such help. The executive power considers that the most practical method of developing the national shipbuilding industry is by facilitating the establishment of shipyards through the granting of liberal concessions of property sites for periods sufficient to insure their development; and, further, by the award of bounties for the new shipping constructed. The president deems the project justified by the imperative necessity of augmenting the Argentine mercantile marine. The maximum tonnage in view is one of 250,000 three years after the promulgation of the law, 400,000 after four years, and 500,000 after five years.

The bill provides that concessions for the installation of shipbuilding yards shall be granted for terms not exceeding forty years. Firms participating in the benefits accorded by this law within five years from the date of its promulgation, will be permitted to occupy, gratuitously, until December 31, 1930, the necessary fiscal lands.

The following table shows the scale of bounties for ship construction, payable in 5 percent bonds of the Credito Argentino Interno:

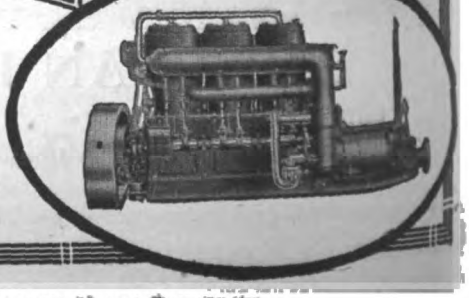
Class of Vessel.	Period Within Which to Be Built and Placed in Service.	Bounty Per Registered Ton.
	Years.	Paper Pesos.†
Self-propelled, over 700 tons, steel hull	1½	100
Do.	3	60
Do.	4	40
Do.	5	20
Self-propelled, over 200 tons, wood or concrete hull	1½	50
Do.	3	35
Do.	4	20
Do.	5	10
Sailing vessel or lighter without self-propulsion, over 200 tons, steel, wood, or concrete	1½	30
Do.	3	20
Do.	4	10
Do.	5	5

* After promulgation of the law. † Value about 96.5 cents.

For Sale
IMMEDIATE DELIVERY
A PAIR OF 150-175 H. P. 6 CYLINDER CRAIG-DIESEL MARINE OIL ENGINES
Cox & Stevens
15 William Street New York

YOUR ILLUSTRATING, CATALOGS AND BOOKLETS
promptly completed in first-class manner by experienced advertising man who has specialized on mechanical subjects fifteen years. Complete service, including writing, designing and printing. No order too small.
Roland C. Wallower, 39 Cortlandt St., New York City

WE ARE SPECIALISTS IN
TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS
IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.
MAKERS OF IRVING'S SUBWAY TRADE MARK GRATING THE RETICULATED KIND

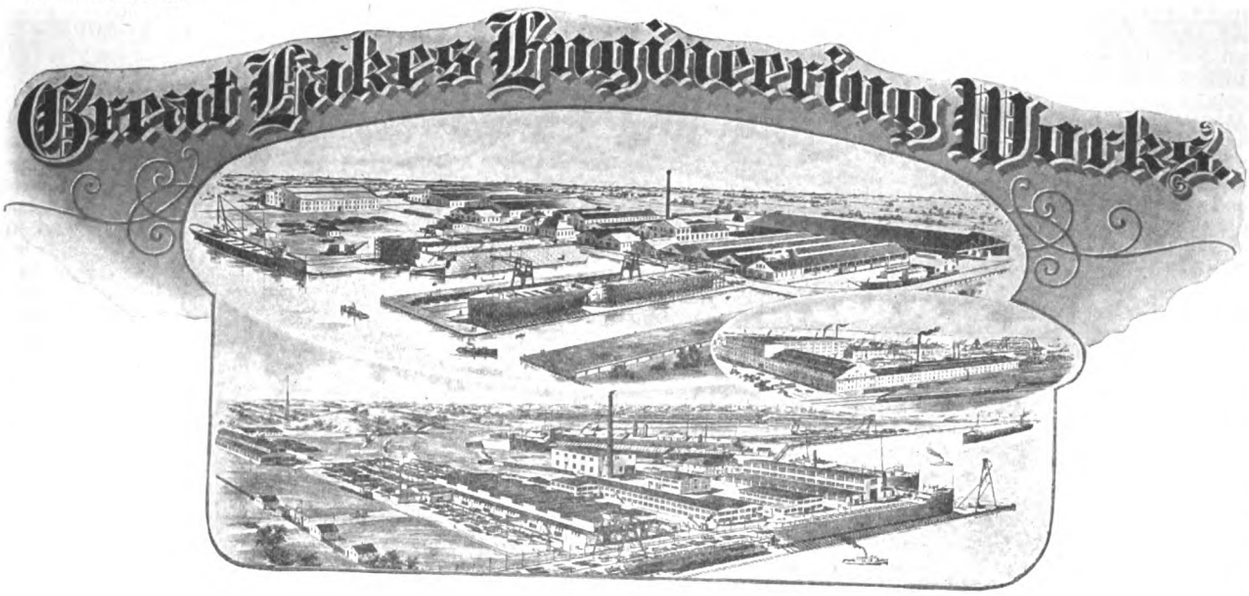
Real WOLVERINE Power
"The Motor With the Bore & Stroke"
Kerosene
Fuel Cost Reduced
from 70 to 80% without sacrificing reliability, flexibility or control. Perfect combustion on Kerosene or lowest grade of Coast Distillate.
Sizes from 5 to 200 H. P.
1 to 6 Cylinders
The gasoline question has been solved by the
WOLVERINE MOTOR WORKS
Bridgeport, Conn., U. S. A.


When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

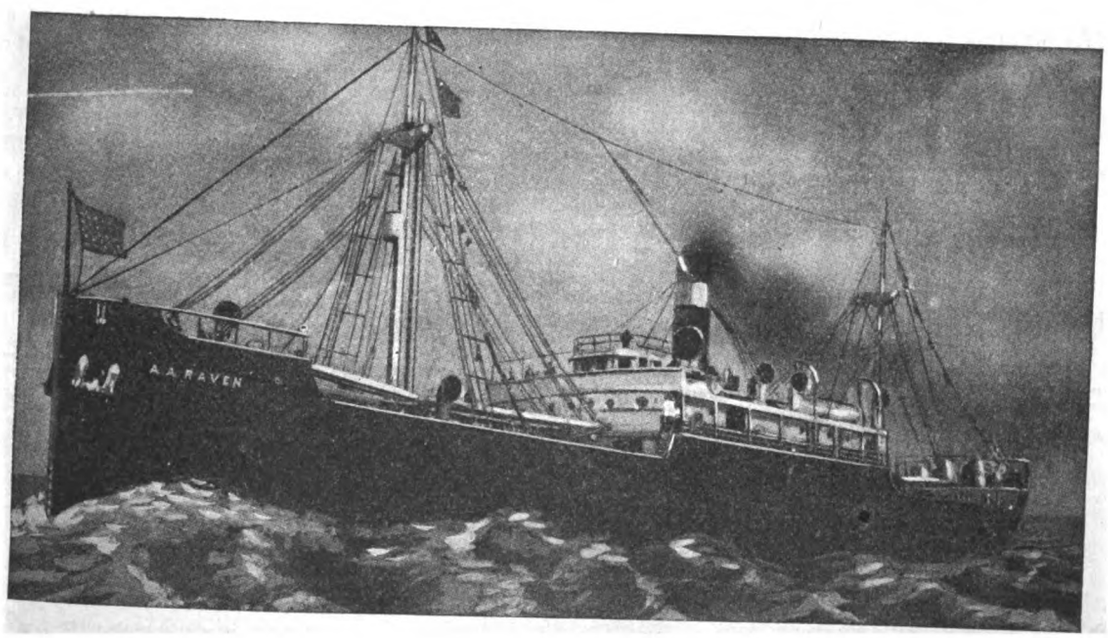
ANTONIO C. PESSANO, CHAIRMAN OF BOARD
JOHN R. RUSSEL, PRESIDENT
H. W. HOYT, VICE PRESIDENT & TREASURER
J. A. UBSDELL, VICE PRES. & GEN'L MANAGER
F. G. MORLEY, SECRETARY

Great Lakes Engineering Works



Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Passaic Yard First to Fill Government Quota

With the launching of the *Acrema* at the Passaic River shipyard, the Foundation Company brought to a close the most successful wooden shipbuilding plant on the Atlantic coast.

In the spring of 1917 the Foundation Company received authorization to build a shipyard in the vicinity of New York City. Despite the unprecedently congested conditions at that time the yard was completed as scheduled, and the first wooden ship launched on the Atlantic or Gulf Coast was delivered to the Emergency Fleet Corporation by this yard.

This ship, the *Coyote,* has already demonstrated the sturdiness of her construction by her survival of the hurricane which drove her on the coral reefs of Bermuda, and left her pounding there for twenty-four hours. Four of the *Coyote's* sister ships built in the Passaic yard are now in service. Although it is regrettable, of course, that the work of such an effective shipyard has been brought to a close, the closing, however, will have comparatively little effect upon the shipbuilding activities of the Foundation Company, which operates two other yards on the Atlantic coast, one on the Gulf, one on the Great Lakes, and three on the Pacific Coast. At these yards the company has under contract 128 ships of both wood and steel.

In addition to the seven 3,500-ton wooden steamers of the *Coyote* type which have already been turned over to the Shipping Board from the Passaic Yards, the company has made the following deliveries: Eight 250-ton wooden deck barges to the United States navy, five 2,800-ton wooden steamers to the British Imperial Munitions Board, and twenty-eight 3,000-ton five-masted steam auxiliary schooners, fully equipped ready for service, to the French Government.

The Savannah, Ga., yards will soon be in a position to deliver the first of thirty-eight 150-foot steel mine sweepers which are being built for the French Government.

TRADE PUBLICATIONS

Parkesburg Charcoal Iron Boiler Tubes are described by the Parkesburg Iron Company, Parkesburg, Pa., in a circular recently issued. Parkesburg Charcoal Iron Boiler Tubes are made from the same grade of knobbled charcoal iron which we have been producing continuously during the past fifty years. Good charcoal iron tubes will outlast steel tubes, due to their resistance to corrosion and crystallization, and tubes from Parkesburg charcoal iron are in service in marine boiles after thirty years' continuous use."

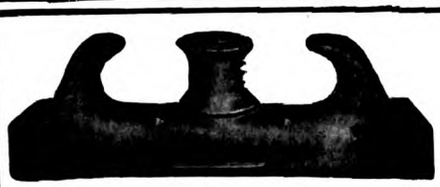
Camerin Pumps for Marine Service are described in illustrated Bulletin No. 7205, just published by the A. S. Cameron Steam Pump Works, 11 Broadway, New York. "A record of years of satisfactory service is behind the Cameron marine pump. It has been severely tested in many installations, and has proved highly successful. The principal reasons for this remarkable success are its simple design, rugged construction, high-grade materials and exact workmanship. The Cameron vertical marine pump has the fewest working parts, yet it embodies every feature that is necessary to meet the most exacting requirements. The steam mechanism has only four pieces, which are unusually strong. The valve gear is of the piston type, suitable for the highest pressures and superheat. The absence of the external valve gear permits unusually compact construction. Cameron marine pumps are making good on the hardest jobs for others, and they can do it for you. Full information on request."

The Multiwhirl Cooler is described in Bulletin 901, just issued by the Griscom-Russell Company, 2124 West Street building, New York. "In the past few years the cooling of lubricating oils for use in turbine bearings, reduction gears and similar heavy duty work and oil for heat treatment quenching systems has received considerable attention by engineers. It has become imperative to devise a means of cooling this oil so that the same quantity of oil can be used over and over again, and so that the oil can be maintained at the proper temperature to secure the most efficient operation Numerous devices were placed on the market, but none handled the situation fully in its various phases. The engineering and designing staffs of the Griscom-Russell Company devoted years of study and experiment to this problem and finally perfected Multiwhirl Cooler. Following this period of development a series of tests was run to determine the proper ratings, pressure losses, etc., for oils of various characteristics. The results secured more than met all expectations. The rate of heat transfer is greatly in excess of that which has been secured by any previous type of commercial oil cooler, and at the same time the oil pressure drop is considerably lower."

REG'D TRADE MARK

INTERNATIONAL
COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS
In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually
Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING
INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N.Y.

STRATFORD OAKUM
QUALITY GUARANTEED JERSEY CITY and EVERYWHERE
GEO. STRATFORD OAKUM CO. - - - - - 165 CORNELISON AVE., JERSEY CITY, U. S. A.



Cast Iron MOORING FIXTURES
GENERAL MARINE CASTINGS made to your own specifications

EMERGENCY FLEET STANDARDS
Prompt shipments. Let us quote on all your requirements.
Use Cast Iron Fixtures M-103
CENTRAL FOUNDRY COMPANY 90 WEST STREET NEW YORK
SALES OFFICES:—NEW YORK, CHICAGO, ATLANTA, DALLAS, SAN FRANCISCO.
FOUNDRIES:—BALTIMORE, MD.—LANSDALE, PENN.—NEWARK, N.J.—MEDINA, N.Y. ANNISTON, ALA.—BESSEMER, ALA.—HOLT, ALA.—VINCENNES, IND.
for Deck, Dock and Pier

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

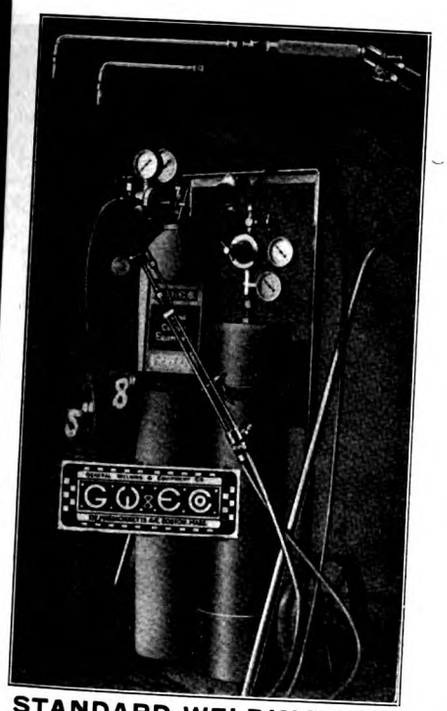
GENERAL WELDING & EQUIPMENT CO.

G.W.E.C.

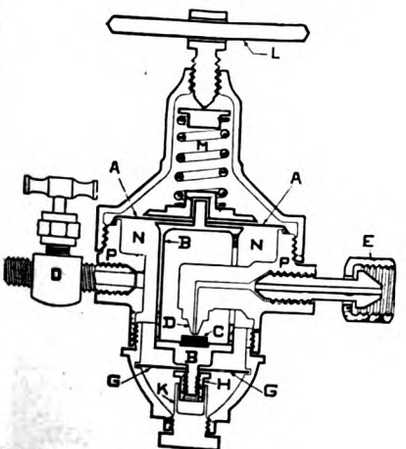
107 MASS. AVE. BOSTON, MASS.

IN USE AT
BETHLEHEM SHIPBUILDING CORP. FORE RIVER, SQUANTUM, PROVIDENCE.
TEXAS STEAMSHIP CO.
CANADIAN VICKERS CO.
WATERTOWN ARSENAL
LORD CONSTRUCTION CO.
GENERAL ELECTRIC CO.
CANADIAN PACIFIC R. R.

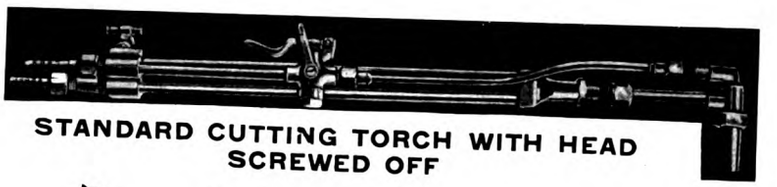
STANDARD WELDING AND CUTTING EQUIPMENT



STANDARD WELDING AND CUTTING EQUIPMENT
$175.00



DOUBLE DIAPHRAGM REGULATOR
PERFECT, FORCIBLE, FRICTIONLESS ALIGNMENT; DIFFERENTIAL SPRING ACTION PRODUCED BY THE DOUBLE DIAPHRAGM (A and G) SYSTEM; QUICK, SENSITIVE AND RELIABLE REGULATION.



STANDARD CUTTING TORCH WITH HEAD SCREWED OFF

STANDARD CUTTING TORCH WITH GUIDE WHEELS

STANDARD WELDING TORCH WITH 3 EXTENSIONS, TO HAVE EITHER A 16-IN. LONG TORCH OR A 22-IN OR A 30-IN. LONG ONE.

DESCRIPTION:

1. REGULATORS ARE OF THE DOUBLE DIAPHRAGM SYSTEM, THAT IS TO SAY, THE MOVABLE CENTERPIECE B CARRYING SEAT C IS NOT ONLY TIGHTLY FASTENED TO MAIN DIAPHRAGM A BUT ALSO WITH FITTING H TO REAR DIAPHRAGM G. THUS SEAT C IS FORCIBLY GUIDED AND RESTRICTED TO AN ABSOLUTELY STRAIGHT UP AND DOWN MOVEMENT, KEEPING ALWAYS THE SAME RELATIVE POSITION TO NOZZLE D. THE REAR DIAPHRAGM ACTS AS A FORCIBLE AND FRICTIONLESS GUIDE AND ALSO AS A QUICK ACTING DOUBLE WAY SPRING ENFORCING AN ACCURATE AND SENSITIVE REGULATION.

NO OTHER REGULATOR HAS THESE ESSENTIAL FEATURES.

2. WELDING TORCHES CONSIST OF A TORCH BASE WITH 2 EXTENSIONS TO HAVE EITHER A 16-IN. LONG TORCH OR A 22-IN. LONG ONE GIVING YOU PRACTICALLY TWO TORCHES IN ONE. A THIRD EXTENSION MAY BE ADDED TO HAVE A 30-IN. LONG TORCH. THUS ONE TORCH WITH ITS 9 TIPS IS SUFFICIENT FOR ALL POSSIBLE REQUIREMENTS.

3 CUTTING TORCHES ARE ECOND TO NONE IN EFFICIENCY, ECONOMY AND ENDURANCE. EVERYTHING IS OF THE MOST MODERN OPEN CONSTRUCTION. EACH PART CAN BE REACHED AND INSPECTED WITHOUT DELAY THE PICTURE ON TOP SHOWS A TORCH WITH THE HEAD SEPARATED FROM ITS BASE. BY LOOSENING TWO NUTS THE WHOLE HEAD COMES, SHOWING HOW EASY IT IS TO EXCHANGE EVEN A COMPLETE HEAD.

MANY THOUSANDS ARE IN CONSTANT USE.

4. EVERYTHING IN OUR CONSTRUCTIONS IS EASILY ACCESSIBLE AND EXCHANGEABLE. WITH CARRYING A FEW SPARE PARTS YOU CAN DO YOUR OWN MAINTAINING EVEN IN FAR AWAY COUNTRIES.

GET OUR CATALOGUES.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

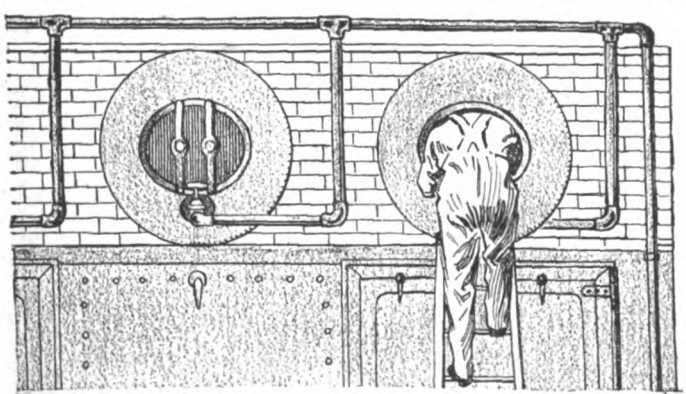
"How to Buy a Crane Wisely" is set forth in Bulletin 401-A, issued by the Pawling & Harnischfeger Company, Milwaukee, Wis. "The purchase of a crane entails much more than a mere examination of specifications and securing the lowest possible price. Its consideration begins when the building or structural plans are being drawn. Just as production of machinery in other fields has been standardized, so the component parts of cranes have been standardized in the P. & H. shops. While it is not feasible to build cranes and lay them 'on the shelf,' the basic design is uniform, and manufacture of parts follows this design; adaptation to installation is but a matter of dimension. It is obvious that standardized production of any commodity results in a better commodity and a much lower cost per item of production. To repeat, the purchaser of a crane begins with consideration of building plans. After a building is up and ready for occupancy the owner frequently discovered the structure is not adapted to a standard crane, but that the crane builder must adapt a crane to the structure, which means that the standardized production system of the crane manufacturer must be bent to the construction of a special type of crane, with a resulting higher production cost and purchase price. Such a condition is caused by neglecting the matter of overhead clearance in the building plans, *i. e.*, distance from top of runway rail to roof and from center of rail to adjoining wall. A poor runway is also a prolific source of trouble. The runway should be strong enough to avoid undue deflection between columns, and it should be stiff enough sidewise to take up the impact due to sudden starting and stopping of the trolley. If the span is not absolutely uniform, there is grave danger of heavy wear on track wheels, resulting in repair bills and high power consumption."

"Stop Wasting Man Power" is the title of a circular published by the McCabe Manufacturing Company, Lawrence, Mass. "With man power both scarce and execssively high, you can protect your flanging output and costs by installing a McCabe pneumatic flanging machine. With but two operators the McCabe will flange your sheets cold up to and including ½ inch in thickness. No lost time waiting for heats—no extra man required—no back-breaking sledging to retard your shop output. The McCabe is a powerful and sturdy machine that will solve your flanging problems. May we tell you in detail 'how' and 'where'?"

Oxweld Injector Type Welding and Cutting Blowpipes are described and illustrated in a bulletin issued by the Oxweld Acetylene Company, Newark, N. J. "Oxweld injector type welding and cutting blowpipes are the most efficient and economical, regardless of the source of your acetylene gas supply. Where for portability or other reasons compressed acetylene is used from cylinders, Oxweld injector type blowpipes utilize far more of the contents of the cylinders than will any other type of blowpipe. Oxweld low-pressure acetylene generators possess advantages that are possible only in a generator of the low-pressure type—namely, simple and automatic action, operation at a pressure of less than ½ pound per square inch, and delivery of a constant flow of acetylene to the blowpipes at unvarying pressure."

Laminated Shims for Marine Use are described in a catalogue published by the Laminated Shim Company, 533 Canal street, New York. "Laminated shims are quickly and easily made by merely peeling off layers of brass to required thickness. There is no filing; no assembling of loose leaves; no fiber to wear away. Accurate shims in a jiffy. Think of the time, money and labor saved! Here is one sure method of decreasing costs while increasing efficiency—for a Laminated shim is absolutely accurate; the adjustment perfect; the surface smooth as glass. Speed up with Laminum for bearing adjustments—composed of a number of layers of brass held firmly together by metallic binder."

Valbestine Twisted Valve Steam Pacing is described in a circular issued by the General Asbestos & Rubber Company, Charleston, S. C. "One spool of Valbestine will furnish the finest kind of packing for every size valve in your plant. No other packing made fills a wider range of usefulness or shows bigger savings in time or money. Only carefully selected long-filler asbestos is used in making Valbestine. Each strand before being twisted into the finished size is thoroughly saturated with Garlock self-lubricating compound. Valbestine is soft, pliable, flexible. It cannot stick, harden or char. Because Valbestine is thoroughly saturated before being made up, each individual strand can be untwisted and made into a perfect packing for any size valve. It is guaranteed—can be used equally as well on valves operating in steam, hot or cold water, oil or acid. Your jobber will gladly give you prices on Valbestine. If he can't supply you for any reason write us direct. We'll send you a sample free."



ECONOMIZE

Boilers must be kept clean to save fuel. The only way to do it is with cleaning tools and plenty of hard work.

DIXON'S

PIONEER

BOILER GRAPHITE

makes most scale brittle, breaks up its adhesion to the metal and thus makes it easy to remove. Saves at least 50% of the time boilers need to be out of service.

Do not confuse Dixon's Pioneer with ordinary Boiler Graphite.

Write for Booklet No. 75-T.

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY

ESTABLISHED 1827

A Man Covering The Pacific Coast

Calling upon Shipbuilders, Supply Houses, etc., wishes to secure the Agency for Two or Three well-known Marine Specialties.

Address F. C. BREWER, 909 Eighth Avenue, Seattle Washington

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Aldrich Marine Directory

1919 EDITION

Our 1918 MARINE DIRECTORY OF SHIPBUILDERS AND VESSEL OWNERS in the United States met such a long-felt want that we are publishing a new and enlarged edition which will be fully up to date.

Under Shipbuilders is a list of all builders, both of steel, wood, and concrete vessels, names of leading officials and necessary information regarding the size, capacity, etc., of each yard.

Under Vessel Owners are included names of leading officials, terminal points, dock superintendents, lists of vessels, etc.

Fully Indexed

Price $5 Postpaid.

MARINE ENGINEERING

6 EAST 39th STREET NEW YORK

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Acetylent Pressure Gencration in Your Own Plant." This is the subject of a bulletin published by the Davis-Bournonville Company, ersey City, N. J., from which we quote as follows: "The largest steel mills, foundries, shipyards, locomotive and car shops and sheet metal working plants, making the most extensive use of the oxy-acetylene process in welding and cutting, for manufacturing and for repair work, generate acetylene in their own plants as it is wanted, with Davis acetylene pressure generators—the acme of efficiency, simplicity, economical production. Acetylene at approximately 1 cent per cubic foot, under pressure, automatic operation, piped to any part of the plant, and no gas holders with storage of free gas. Made in three types—stationary, portable and two-pressure generators for combined pipe-line service and compression into portable cylinders. Stationary acetylene pressure generators in five sizes:

No.	Carbide Capacity Lbs.	Water Capacity Gals.	Acetylene Per Hour Cu. Ft.
25	25	25	25
50	50	50	50
100	100	100	100
200	200	200	200
300	300	300	300

Hourly output is in accordance with the rules of the Underwriters' Laboratories of the National Board of Fire Underwriters. Davis generators are installed in batteries for greater requirements; many plants have batteries of from two to twelve of the No. 300 generators. Carbide is estimated to produce from four to five cubic feet of acetylene per pound of carbide, a full charge to operate for the full working period of four to five hours. Davis acetylene pressure generators were designed specially for oxy-acetylene welding and cutting installations, and are manufactured with twenty years of experience in acetylene generation. They were the first automatic-feed pressure generators, the first on the inspected list of the National Board of Fire Underwriters, and have been in constantly increasing successful use. The list of successful users is significant—write for it and for detailed information and engineering service to determine the practicability of operation in your own plant."

The Marine Engines, marine engine parts, heavy gray iron and semi-steel castings made by the Hooven, Owens, Rentschler Company, Hamilton, Ohio, are described in a circular just issued.

Benjamin Marine Lighting and Signaling Apparatus is described in an illustrated catalogue published by the Benjamin Electric Manufacturing Company, Chicago, Ill. "The name 'Benjamin' on marine lighting and signaling apparatus insures an elasticity of service never before possible. For the Benjamin line is thoroughly interchangeable. The Benjamin junction box, for instance, is tapped to accommodate any Benjamin marine receptacle, connecting block, switch, etc. Changes in the character of service required from any outlet can be made instantly by simply substituting the necessary parts. And Benjamin plugs will make contact in any Benjamin screw base receptacle. Benjamin apparatus has the unqualified endorsement of the Board of Underwriters and of well-informed marine engineers."

Marine Steam Turbines are the subject of Bulletin No. 241, just published by the Terry Steam Turbine Company, Hartford, Conn. "American naval vessels—the ships that guarded our crusaders over seas to the Great Adventure; from keel to wireless tip these valiant defenders of the right carry the best there is in the way of equipment. With a world to choose from the navy selects its equipment not only with discrimination but with unerring precision. For a product to become standard in the navy, therefore, is a proof of its worth. So when you enter the market for steam turbines keep this fact in mind: The United States navy uses more than 1,000 Terry turbines. If you would know why write for Terry Bulletin No. 241. It shows why so many navy engineers advise."

The Lysholm Patented Plate Punch Table is described in a catalogue published by the Norbom Engineering Company, Denckla building, Philadelphia, Pa. One of the illustrations shows a Lysholm plate punch table punching 4,000 holes per day in steel plates. "Rapid production in punching holes in boiler plate is made possible on this machine by means of a roller table. Lateral and sidewise movements are under the lever control of the operator. The tables are built with roller bearings to facilitate rapid movement of the work. Plates up to 30 feet by 8 feet from ¼ inch to 1⅛ inches in thickness may be handled readily. Various shipyards and plate shops have reported records that average 4,000 holes per nine-hour day. Six thousand seven hundred holes in a nine-hour day is a common occurrence. Full information on request."

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

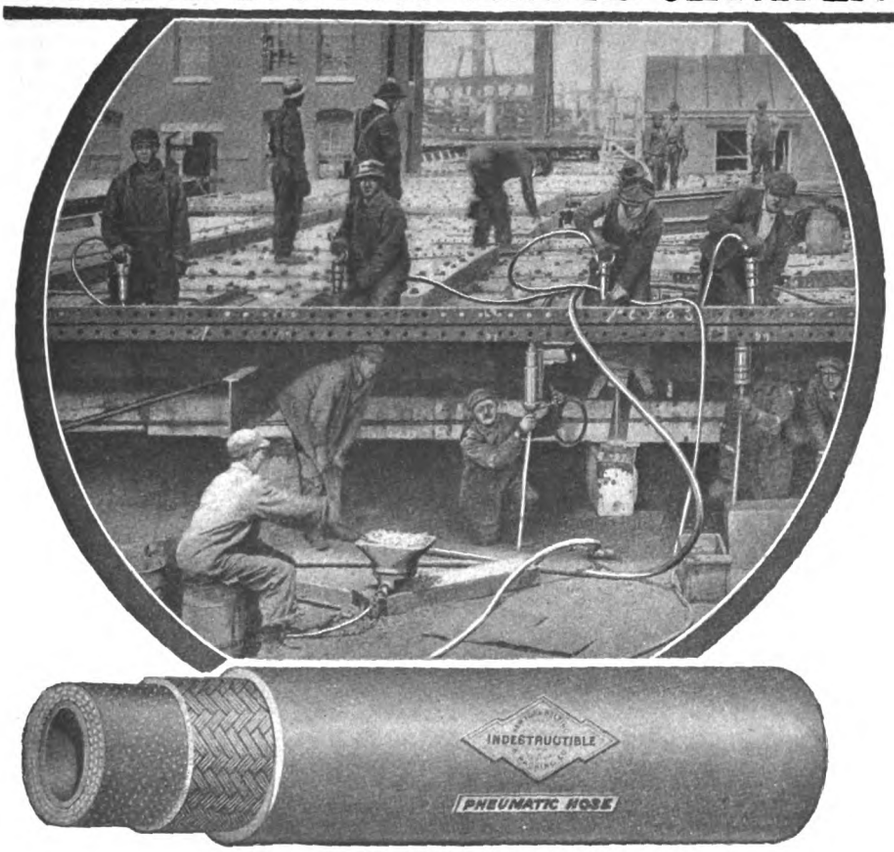
The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

Cumberland Shipbuilding Co.
SHIPBUILDING AND REPAIR PLANT
SOUTH PORTLAND, MAINE
Telephone 6936
Builders and repairers of all types of wooden vessels.
New Marine Railway of 2,500 tons capacity. Inquiries solicited for estimates, costs and dates. Most modern shipbuilding plant on the Atlantic Coast, with every facility for expeditious work. Most accessible harbor on the Coast.

OVER
350 VESSELS
(NOW BUILDING)
WILL CARRY
PROPELLERS
DESIGNED BY
THE AMERICAN SCREW PROPELLER CO.
1326-28 CHESTNUT ST., PHILADELPHIA, PA.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

WHERE ROUGH USE IS CERTAIN



When you buy pneumatic tool hose you pay least in the long run, if you buy long-lived hose. Otherwise any one of a dozen faults, common to cheaper grades, can delay a contract or hold up delivery. And that costs money.

Where rough use is certain, you'll do well to consider

"INDESTRUCTIBLE" PNEUMATIC TOOL HOSE

For there are a number of special features that make it best in its field.

First, there's an oil-proof, seamless inner tube that never works away from its wall of protecting duck. And that duck is three-ply rubber filled. Then there's a braided fabric jacket—continuously woven. It adds great strength. Lastly there's a thick rubber cover that's built to take punishment. It won't kink—you can't make it. And that's a huge time-saver itself.

It is one of many products built by pioneers in the mechanical rubber goods field which, by the manner of its making, cannot fail.

New York Belting and Packing Company

MECHANICAL RUBBER GOODS

Makers of "TEST SPECIAL" Rubber Belting

New York Boston Chicago Philadelphia San Francisco Pittsburgh St. Loius

NEW YORK BELTING & PACKING CO. FOUNDED 1846 INCORPORATED 1856

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:14 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

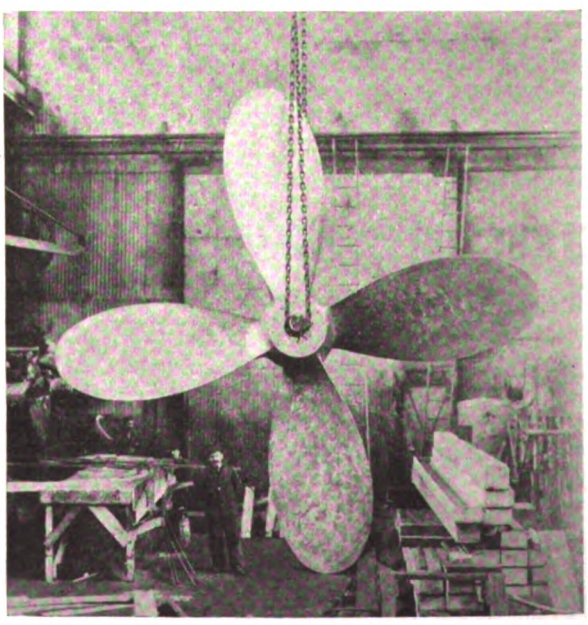
The Stratton Air Separator is described and illustrated in Bulletin 1110, published by the Griscom-Russell Company, 2124 West Street building, New York. "Air always contains a certain amount of water vapor, the quantity depending upon the locality, altitude and weather. After air has been compressed and its volume therefore reduced, the original quantity of water in the air becomes a much greater proportion of the air volume. The air becomes saturated above the point at which it can carry all of this water as a vapor, just as a sponge can hold only a certain amount of water without dripping, and the lightest pressure added after this point is reached will cause water to fall from the surface. In the case of air, if compression were not accompanied by a rise in temperature of the air, this water vapor would be condensed, but as it is, the increased temperature of the air, due to compression, serves to maintain the water as a vapor. If this high temperature compressed air were supplied to sand blast machines, pneumatic tools, etc., it would be cooled by its passage through pipe lines and by its contact with the machines, with the result that the water vapor would be deposited as liquid water. In sand blast machines it would cause the sand to pack and prevent it from flowing freely from the blast nozzle, thus impairing the efficiency and necessitating frequent shut-downs for cleaning. Water in the air supplied to pneumatic tools would occupy valuable power space in the cylinders of the tools, decrease their efficiency, and if enough were present would result in damage to the tools themselves. It can be readily seen that it is vitally important to remove the water from compressed air before the air is used. The first step toward attaining this end is to reduce the temperature of the air low enough to insure that practically all of the water has been condensed. This is usually accomplished by proper water cooling of the compressor cylinders, or by the use of after coolers. However, neither of these devices removes the water from the air; they merely condense the vapor and bring the air into a condition, permitting the mechanical removal of the water by a Stratton Air Separator."

The "Giant" Semi-Diesel Fuel Oil Engine is described in a bulletin just published by the Chicago Pneumatic Tool Company, 1044 Fisher building, Chicago, Ill. "Realizing the widespread demand existing for a low-grade fuel oil engine, correct in principle and built to endure the severe usage that such engines must withstand, we have employed our broad experience and unusual facilities in the design and production of the Giant Semi-Diesel fuel oil engine, described in the pages following. The severity of the service and the widely varying degree and quality of fuels employed impose requirements in an engine of this character that must be met with an intelligent knowledge of service conditions only obtainable through broad observation and thorough tests. Intricate mechanism and delicate adjustments have no place in an engine for this work. The Giant semi-Diesel fuel oil engine is the result of several years of painstaking development. Although introduced only about five years ago, there are many thousand horsepower of these engines in successful service."

Power Punches and Shears are described in a catalogue issued by the Beatty Machine & Manufacturing Company, Hammond Ind. One of the illustrations shows the company's No. 7-72-inch throat; capacity, 1¼-inch hole through 1-inch plate. "Arranged for direct-connected motor drive, fitted with floating punch stem and electric solenoid for operating clutch. All shaft bearings are of phosphorous bronze, bushed and fitted with ring oilers."

The "Fourth Edition of "The Starrett Book for Machinists' Apprentices," published by The L. S. Starrett Company, Athol, Mass., has just been issued. The book, now in its thirty-fifth thousand, is a well-illustrated colume of 176 pages, bound in red Athol leather, and designed to answer in an authoritative manner questions as to how to do the every-day work of the average machine shop. The different classes of work are taken up separately, the most common errors pointed out and the correct practice indicated. Much attention is given to the proper use and care of tools, the reading of micrometers and verniers, bench work, lathes and lath tools, grinding, belts, gears, etc. The book is essentially for the apprentice rather than the expert machinist, though the latter will find much of interest and value, and is intended to provide the answers to the many questions usually asked of the foreman or superintendent. Distribution is being made exclusively through the hardware dealers handling the Starrett line of tools, the price being 50 cents per copy. The briefest examination of the volume will convince the ambitious apprentice or machinist of its value in his everyday work.

HYDE



MANGANESE BRONZE

STANDARD FOR TWENTY YEARS FOR PROPELLERS

SOLID BRONZE PROPELLERS FROM 8 INCHES TO 20 FEET IN DIAMETER

BRONZE BLADES AND HUBS OF ANY SIZE

HYDE WINDLASS COMPANY, BATH, ME.

Generated on 2024-09-12 08:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

Sales Engineer, experienced in marine engineering and naval construction open for engagement. Is familiar with domestic and foreign markets. Address *Naval Engineer,* care of MARINE ENGINEERING.

Executive Engineer, experienced in entire charge of hull and machinery, plant layouts and equipment, superintendence and erection. Good references; go anywhere. Responsible position only. Address *Box X,* care of MARINE ENGINEERING.

Position Wanted by Naval Architect, technical assistant to executive, or designer for consulting naval architect. Technical graduate, twelve years' steel experience. Competent executive, energetic and systematic. Address *Box 117,* care of MARINE ENGINEERING.

Is There Such a Place? Marine Engineer, technical, wide experience, wishes to locate with American associations only, where "pep" and "go" are the passwords, simplicity of design and system is the goal, and where old maids and piddlers are absolutely not. Address *American,* care of MARINE ENGINEERING.

Young Man, aged 24, with technical education, five years' experience as engine draftsman, estimator and charge man, now employed in Gulf Coast yard as chief draftsman, is open for position with East or West coast yard. Holds first assistant engineers' license. Is married. References. Address *Gulf Coast,* care of MARINE ENGINEERING.

Man Experienced as Manager, contractor's superintendent and chief engineer; now with Concrete Ship Section E. F. C., wants to organize some existing shipyard for construction of concrete ships, or establish new yard. Acquainted with all available concrete ship talent, and could enlist strong organization immediately. Address *Organizer,* care of MARINE ENGINEERING.

For Sale—Full set of working shop drawings of 24 inches by 36 inches, four-cylinder, two-cycle, single-acting fuel-oil engine. About 80 sheets complete for building engine in four months; 1,450 horsepower; suitable and specially designed for Shipping Board vessels; mechanical atomization, marine Marshall reversible valve gear; 60 percent cut-off each for oil and compressed air starting without dead centers; no loose levers, cams or springs; complete control by marine handling levers; write for drawing. Address *Box B 6,* care of MARINE ENGINEERING.

Shop Superintendent, who is a Mechanical Engineer, experienced in boiler shop work, especially Scotch marine boilers. Is well versed in shop management. Will guarantee to take any boiler or machine shop and increase its production 20 percent. First-class reference. Address *Box 41,* care of MARINE ENGINEERING.

Mechanical Engineer wants position as production manager or general shop superintendent. Experienced in boiler construction, machinery building and erecting, structural iron fabricating and erecting. Latest methods in shop management. Salary $5,000 to $8,000 per year, depending on scope of work. Age 36. Address *Box 93,* care of MARINE ENGINEERING.

For Sale—Tug W. H. Williams. Iron hull, 90′ x 19′ x 10′; boiler, 10′ 6″ x 12′ 6″; engine, 15 x 28 x 22; bunker capacity, 25 tons. Equipped with condenser, steam steering gear, two steam capstans; electric lights throughout. Entirely rebuilt in 1917 and in first-class condition. Address *Tug,* care of MARINE ENGINEERING.

Wanted—A bargain in some freight steamer. Any size from 1,000 to 5,000 tons. What is wanted is a sound, old and slow freight steamer, for very cheaply carrying iron ore a long distance in the ocean. Should be either auxiliary or capable of being made such. Advertiser is in no hurry and will wait until he gets a bargain for cash. Answer with full details as to length, beam, draft, tonnage, age character of boat, price, etc. Address *Freight Steamer,* care of MARINE ENGINEERING.

Wanted—Naval Officer, expecting release from service desires position as Marine Superintendent or Superintending Engineer with steamship or tug line. Hold chief engineers' license for unlimited ocean tonnage. During war served ten months as chief engineer of a battleship and eleven months supervising hull and machinery repairs on naval and merchant type vessels. Go anywhere. Industrious, loyal and progressive. Address *Marine Superintendent,* care of MARINE ENGINEERING.

Wanted—Cheap for Cash, a small, old-fashioned, coal-fired steam harbor boat, suitable for carrying 6 or 8 passengers and 2 to 3 tons of freight from mainland to island 1 miles in the ocean, where the weather is sometimes rough. Fancy boats not wanted. Only a very cheap, rough, out-of-date boat, which is or can be well housed over for protection against bad weather. Address, giving full particulars, age, size, shape, price, etc., *Harbor Boat,* care of MARINE ENGINEERING.

A Practical Iron and Steel Shipbuilder and Marine Engineer, aged 40, is free to accept an appointment as manager of a shipbuilding concern in January, 1919. Ten years' experience as manager of shipbuilding, combined with ship repairing and engineering establishment. Thoroughly conversant with present-day methods of merchant ship and engine construction. Repairs to hull and machinery, classification requirements organization and North Country costs of shipyard labor. Address "*Z. N.* 174," care of Deacons, Leadenhall Street, London, England.

Mechanical Engineer, with twelve years' experience on marine work, desires change. Employed with Shipping Board since war started, but wishes to return to commercial work. Particularly experienced in the design of reciprocating, steam and Diesel engines and auxiliaries. Graduate of leading university, in both mechanical and electrical engineering. Address *Commercial Work,* care of MARINE ENGINEERING.

Graduate Naval Architect seeks position as naval architect and secretary of small shipyard, or sales engineer for marine manufacturer. American; age 29; in perfect health. Industrious, resourceful, loyal, tactful. Eight years designer, estimator, executive. Successful business and sales record. Now employed, but desires broader field of service. Address *Box 507,* care of MARINE ENGINEERING.

Ship Repairer, Builder, Naval Architect, Marine Engineer and Estimator, twenty years' experience in steel shipbuilding in all its branches, desires responsible position with established shipbuilding or repairing plant. Up-to-date methods, coupled with economy for quick handling of large repair and conversion jobs. Experience in naval as well as all kinds of mercantile craft. Age 36; would go anywhere. Address *Box 998,* care of MARINE ENGINEERING.

"Cutting Costs by the Brown Portable Continuous Motion Handling Machine" is the title of Bulletin No. 2, just published by the Brown Portable Conveying Machinery Company, 10 South La Salle street, Chicago, Ill. "Brown portable handling machines cut handling costs to the minimum—saving from 50 percent to 80 percent of hand methods' cost. The difference (in the money saved) goes into your profits every year. These handling machines do the work (with less men) in from one-third to one-half the time. A 'Brown-Portable' —though using few men—makes every work day twice or three times as long in money value—in work produced. Also, a 'Brown-Portable,' in reducing a force of men to a few men, is an insurance against labor difficulties and labor shortage. They make the laborious work so easy that your best workers stay with you."

The Standard Cutting Torch, manufactured by the General Welding & Equipment Company, 107 Massachusetts avenue, Boston, Mass., is described in a circular just issued. "Many thousands of these cutting torches are in daily use all over the United States and Canada, a greater part being repeat orders from concerns having used these cutters for a number of years. They work in shipyards, arsenals, steel foundries and other important concerns. Their principal features: Our cutters are second to none in efficiency, economy and endurance. They are so constructed that all parts of the cutting torch are easily accessible and exchangeable, and can be repaired in a few minutes by your own man. With carrying a few spare parts, a burnt and even smashed-up cutter can be fixed up like new in less than half an hour. No cutter need come back to our factory to be repaired. You can do it yourselves and avoid the delay of a week or two."

Generated on 2024-09-12 08:12 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The "High Cost of Riveting" is reduced to a minimum by installing Hanna type riveters, according to a bulletin published by the Vulcan Engineering Sales Company, 1755 Elston avenue, Chicago, Ill. "They are made in 120 styles and sizes. One machine illustrated is a new type of punch and riveter. It has a reach of 18 inches and a gap of 15 inches. Develops 80 tons on the die at 100 pounds air pressure. Punching capacity, 1-inch holes in ⅜-inch material; riveting capacity, 1-inch steam-tight rivets. Absolutely tight rivets are driven with a single blow. Time is saved and hydraulic results are obtained at one-third of the power cost."

"The Wrench Booklet," published by J. H. Williams & Co., 63 Richards street, Brooklyn, N. Y., has just been published. "Pursuant to our policy, inaugurated nearly half a century ago, of standardizing lines of drop-forged wrenches, we have now developed some forty patterns in about 1,000 sizes, with openings from 3/16 to 7⅝ inches for various trade needs. All are reliable, efficient tools, made of the best materials obtainable for the purpose and manufactured by methods developed and perfected through many years' experience. But we realize that design, utility and quality alone are not of consequence if we cannot ship on receipt of specifications. Therefore we have pleasure in announcing we are ready to deliver from stock—ship on the same day that order is received—95 per cent of our catalogue wrenches, each of which is designed for the greatest utility and wear in its particular field of activity."

The McNab "Logometer" is described in a bulletin published by the McNab Company, Bridgeport, Conn. "The McNab Logometer is an instrument specially designed for, and is highly approved by, the Engineering Section of the Emergency Fleet Corporation for installation in the engine room under Technical Order No. 104.

"The Only Strictly Marine Type Oil Filter Made" is described in Bulletin B No. 26, just issued by the Richardson-Phenix Company, 118 Reservoir avenue, Milwaukee, Wis. "Filtration of used oil from reciprocating engine or turbine-driven ships, makes the ship independent of fresh supplies at foreign ports and reduces the space occupied by the supply of fresh oil it is necessary to carry—two considerations which are extremely important under present shipping conditions. So important are these two items considered by the Emergency Fleet Corporation, that an oil filter is part of the standard engine room equipment of all their ships. Oil does not wear out; it merely gets dirty; remove the impurities, and the lubricating properties of the filtered oil are equal to new oil. Of course, filtering the used oil and using it over and over saves many dollars on oil bills. The No. 70 Peterson Marine Type filter shown was specially designed to meet Emergency Fleet specifications. It is being installed on hundreds of this corporation's ships. It is efficient, sturdily built to meet marine conditions, without any moving parts, to be periodically replaced, and it is easy to clean while in operation."

Lidgerwood Steam Mine Hoists and steam and electric hoists for all purposes, cableways and cableway excavators are the subject of a handsomely illustrated catalogue, No. 19, just issued by the Lidgerwood Manufacturing Company, 96 Liberty street, New York.

The "Maxi Tap" staybolt tap is described in a circular issued by the Greenfield Tap & Die Corporation, Greenfield, Mass. "Two of the features which make the 'Maxi' staybolt tap such a phenomenal producer are the pilot point and the chip breaker. The pilot point acts like a bridge reamer, aligning the holes for the remainder of the operation. The chip breaker prevents the accumulation in the flutes of long, tightly curled chips, which clog and retard the progress of the ordinary tap."

"Leaders in Peace or War" is the title of a circular published by the Sperry Gyroscope Company, Manhattan Bridge Plaza, Brooklyn, N. Y. "With the advent of peace the Sperry Gyroscope Company announces that it is able to supply gyro-compasses for use on ships of the merchant marine. During the war nearly one thousand Sperry gyro-compasses have been constant aids on the thousands of miles of patrol covered by each vessel of the allied navies under all conditions of weather, and proved of invaluable assistance in navigating hazardous waters and making rendezvous at all times of day and night. The compass being non-magnetic, is not subject to the usual errors and discrepancies of the magnetic compass, and thereby insures a truer course with greater safety and economy of time."

CHIEF ENGINEER

of one of the largest structural fabricating plants in the South desires permanent connection with large shipbuilding plant or large construction company doing war work. He is also manager of an engineering firm doing consulting work for industrial plants, bridges and miscellaneous steel and reinforced concrete structures. He is 36 years of age, married, graduate civil and mechanical engineer, and has had over 15 years' broad experience managing and engineering large undertakings; is familiar with finance, accounting and efficient organization. Has been connected with the U. S. Government over three years. Salary $9,000 to $12,000 per year, depending on scope of work. Address, Box 215, care of Marine Engineering

FOR SALE
THREE SMALL EAST RIVER FERRY BOATS

now lying at foot of Houston Street, New York, and foot of Grand Street, Brooklyn, property of Nassau Ferry Co., which, having shut down operations, will sell. Price and particulars upon application to MR. HOWARD, Nassau Ferry Co., 82 Wall Street, New York.

HULL DRAFTSMEN

for breakroom work in production department. Reply with full particulars regarding age, salary expected, experience, when available, etc.

F. T. WARNER
GROTON IRON WORKS
GROTON, CONN.

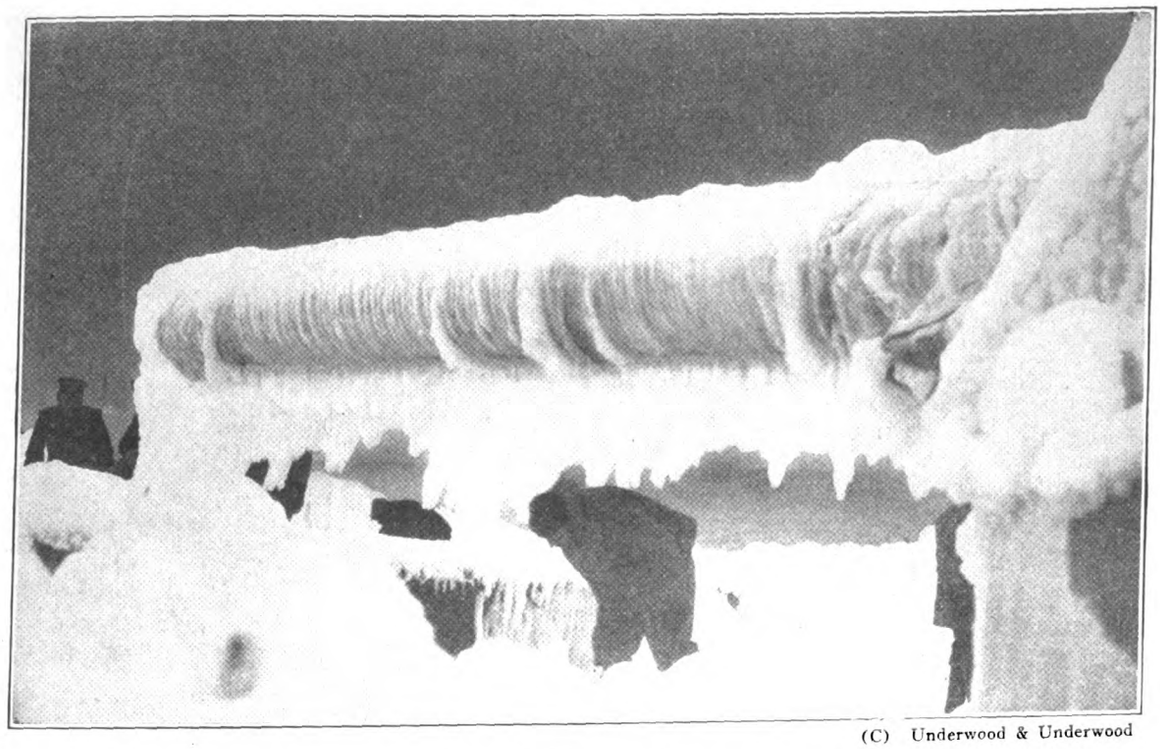
STRUCTURAL STEEL DRAFTSMEN

wanted immediately for shipyard production department work, Answer in full regarding age, salary expected, when available, etc., to

F. T. WARNER
GROTON IRON WORKS
GROTON, CONN.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



(C) Underwood & Underwood

The Record of "85% Magnesia" in America's War Fleet

The Navy is always reticent as to its achievements, but gradually its part in the great war is becoming known. Little by little we are learning how largely America's ships and American sailors were responsible for the downfall of the submarine and the final surrender of the enemy fleet.

When the full story can be told, it will be found also that "85% Magnesia" has fully maintained its reputation as the national coal saver and defender of steam.

Every one of Uncle Sam's huge battleships, every American transport, and every destroyer has its pipes and boilers protected against heat leakage by an impenetrable armor of "85% Magnesia."

In the arctic weather of stormy Northern waters, amid snow and ice that often covered the decks and sides of the vessels for days at a time, through days of dark Atlantic gales, the fleet never failed in its mission, nor did the "85% Magnesia" covered pipes and boilers fail to deliver a plentiful supply of hot, dry steam to the engines.

The country is justly proud of its Navy. We take both pride and pleasure in the fact that "85% Magnesia" did its share to make the Navy's triumphs possible.

We invite everybody interested in coal saving to write for the Table showing the actual Saving in Dollars and Cents by the use of "85% Magnesia" coverings. This Table, prepared by the Mellon Institute of Industrial Research, is the result of over a year's exhaustive tests, under actual service conditions. To engineers we will also send copy of the Magnesia Association Specification, compiled and endorsed by the above Institute.

MAGNESIA ASSOCIATION *of* AMERICA

**721 Bulletin Bldg.
Philadelphia
Penna.**

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D. Crabbs, The Philip Carey Co. . . Cincinnati, Ohio
Alvin M. Ehret, Ehret Magnesia Mfg. Co., Valley Forge, Penna.
J. R. Swift . . . . The Franklin Mfg. Co., Franklin, Penna.
R. V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Penna.

Copyright 1919, M. A. of A. Permission to reprint by application.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

BUSINESS NOTES

The Independent Pneumatic Tool Company has opened a branch office and service station at 1103 Citizens' building, Cleveland, Ohio, under the management of Hayden F. White.

J. G. Osgood

J. G. Osgood, lately manager of the pneumatic tool sales for the Chicago Pneumatic Tool Company, and for twelve years a member of their sales organization, became general sales and service manager of the Keller Pneumatic Tool Company on February 1.

Announcement is made of the reorganization of the Talbot Engineering Corporation, to manufacture Talbot boilers, engines, valve fittings, pumps and supplies. The corporation has established an engineering consulting board at its New York office, 66 Broadway. Factories in both the United States and Canada provide facilities for prompt deliveries on complete marine machinery from 100 horsepower up. The Talbot power plant is being adapted to burn coal as well as crude oil of all grades.

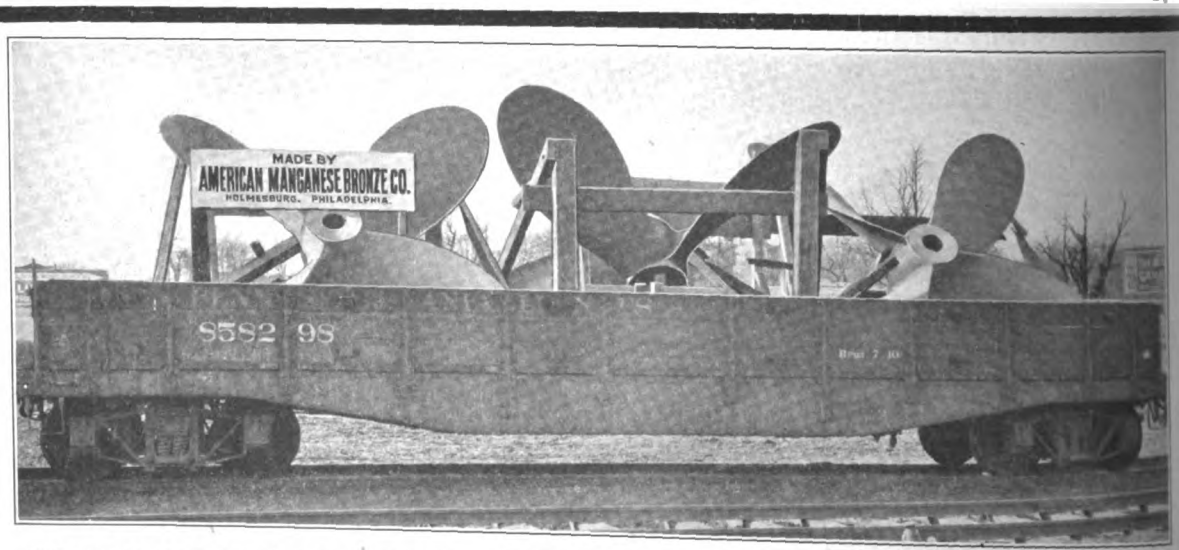
Under the firm name of A. A. Gray & Company, Anslie A. Gray, who lately received an honorable discharge from the Ordnance Department of the United States Army, in which he served during the war, has opened offices at 1547 Marquette building, Chicago, Ill. He will direct the efforts of a staff of competent men in assisting manufacturers in solving their problems of production, selling and distribution.

C. I. HENRICKSON, late of the Dayton Pneumatic Tool Company, has again been retained by the company for special advertising work in connection with the private advertising service which he has organized in Chicago. His offices are located at 609 Fisher building.

On January 1 the Duntley-Dayton Company took over the entire output of the Dayton Pneumatic Tool Company, Dayton, Ohio, and announced its entry into the pneumatic tool field. W. O. Duntley, former president of the Chicago Pneumatic Tool Company, is president of the new concern. Offices of the company are located in the Westminster building, Chicago; 295 Fifth avenue, New York, and in the Commercial Trust building, Philadelphia.

W. O. Duntley

J. L. Crowley has been appointed special railroad representative of the Rich Tool Company, of Chicago. His headquarters will be located at the company's main office in the Railway Exchange building.



"MANGANESE BRONZE PROPELLERS"

Have been made by us for the following well known concerns

American International Shipbuilding Corp.
Baltimore Dry Dock & Shipbuilding Company
Bethlehem Shipbuilding Corporation
Canadian Vickers, Ltd.
Federal Shipbuilding Company
Manitowoc Shipbuilding & Dry Dock Company
Newport News Shipbuilding & Dry Dock Co.
New York Shipbuilding Corporation
Norfolk and Washington Steamship Company
Pocahontas Fuel Company
Pusey and Jones Company
Red "D" Line of Steamships
Standard Shipbuilding Corporation
Standard Motor Construction Company

Be Convinced, Write for Pamphlet "C".

AMERICAN MANGANESE BRONZE CO.

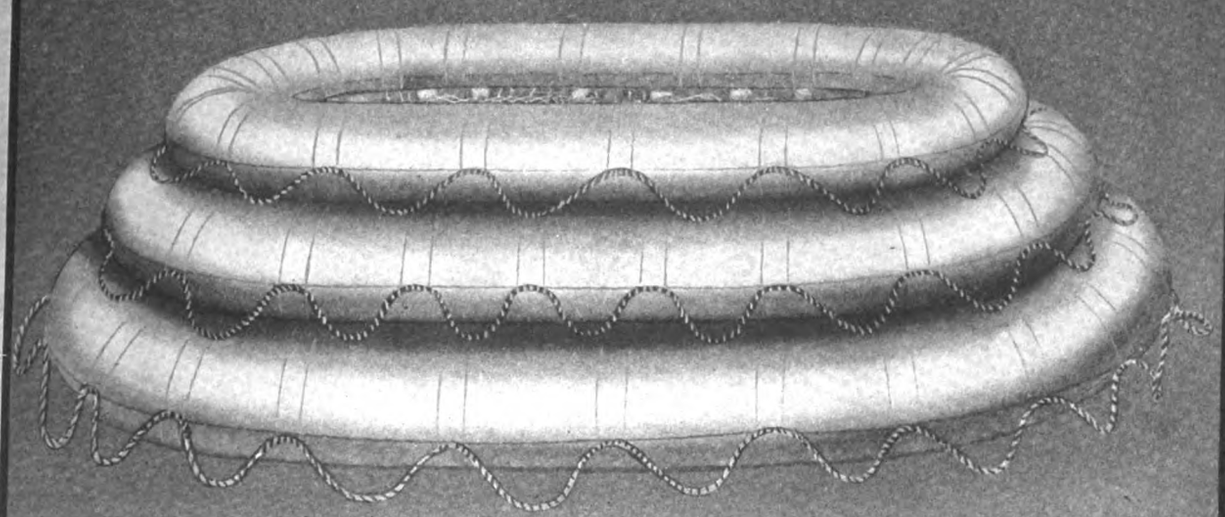
Holmesburg, Philadelphia, Pa.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. 50 E. 42nd Street, New York

London House: 5 Lloyds Avenue, London, E. C

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

H. W. Ullman has been appointed representative in the St. Louis territory for the Rich Tool Company, of Chicago, with offices at 103 Security building, St. Louis, Mo.

The New Jersey Zinc Company has announced the establishment of its general offices at 160 Front street, New York City.

The John L. Whiting-J. J. Adams Company, Boston, Mass., has received a contract to supply the United States Navy with paint and scrubbing brushes. The order amounts to about $140,000.

The Eastern branch of the Independent Pneumatic Tool Company in New York will be moved from 170 Broadway into larger quarters at 1463 Broadway, at Forty-second street, on March 1.

British Shipping Losses

The *Daily Telegraph*, London, in an article by Archibald S. Hurd, reports that Great Britain lost 9,000,000 tons of shipping during the war. This amount is ten times as much as was lost by either France or Italy, and seventeen times as much as was lost by the United States.

Cost of Repairs on Lake Boats

Repairs on the steamer *M. A. Reeb*, which is being repaired at a Buffalo drydock, will cost from $125,000 to $135,000. The cost of ship repairing on lake steamers is becoming a very important matter to underwriters. For example, the repairs on a Cleveland steamer last summer cost more than the hull valuation. The steamer was valued at $220,000, and the repair bill was $230,000.

New Insignia to Be Carried on Shipping Board Vessels

The Shipping Board has ruled that the letters *S. B.* appear on vessels chartered from that organization. The American steamer *Lake Marion*, with cargo for the Mallory Line, between Mobile and Cuba, is probably one of the first vessels to bear the new insignia.

Developments in the Employment Division of the Atlantic Coast Shipbuilders' Association

Meetings have been held on February 7, at the Adelphia Hotel, Philadelphia, and on February 28, at Chester, Pa., to discuss the various employment problems arising with the necessary labor adjustment and unemployment conditions resulting from the shifting of labor.

At the first meeting it was decided to include only employment managers of shipyards at future meetings. Attention was called to the creation of a committee on information, which was established as a clearing house on information regarding labor supply. C. S. King, as secretary, will act as correspondent, and Paul Grendall as chairman. It was decided to publish the report on labor turnover adopted by the committee at the November meeting.

At the March meeting, Earl Dean Howard, employment manager for Hart, Schaffner & Marx, and chairman of the Industrial Relations Committee of the United States Chamber of Commerce, will give an address. Employment managers of the Atlantic Coast, Gulf of Mexico and Great Lakes districts will be present at this meeting.

Shipping Lectures at New York University

Under the auspices of the Wall Street Division of New York University, William M. Brittain is delivering a series of lectures on Merchant Marine Administration and Operation at 25 Broad street, New York City.

The lectures will cover the following: American merchant marine; Government relation to shipping; physical features of merchant fleet; types of water carriers; rates and rate structure; ship operation; admiralty law and the law of carriers; international and constitutional law affecting shipping; ship and freight brokerage; marine underwriting and taxation of shipping.

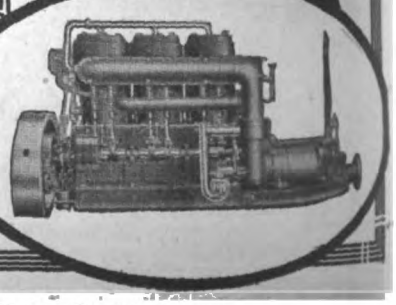
San Francisco Eliminates Wharfage Charges

By a decision of the State Board of Harbor Commissioners of California wharfage and dockage charges will be elimination at the port of San Francisco after April 1, 1919.

For Sale
IMMEDIATE DELIVERY
A PAIR OF 150-175 H. P. 6 CYLINDER CRAIG-DIESEL MARINE OIL ENGINES
Cox & Stevens
15 William Street New York

YOUR ILLUSTRATING, CATALOGS AND BOOKLETS
promptly completed in first-class manner by experienced advertising man who has specialized on mechanical subjects fifteen years. Complete service, including writing, designing and printing. No order too small.
Roland C. Wallower, 39 Cortlandt St., New York City

WE ARE SPECIALISTS IN
TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS
IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.
MAKERS OF IRVING'S SUBWAY TRADE MARK GRATING THE RETICULATED KIND

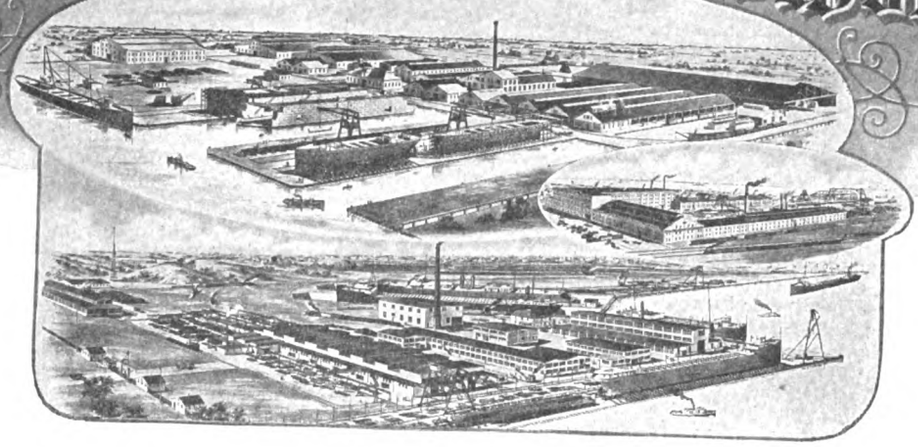
Real WOLVERINE Power
"The Motor With the Bore & Stroke"
Fuel Cost Reduced
from 70 to 80% without sacrificing reliability, flexibility or control. Perfect combustion on Kerosene or lowest grade of Coast Distillate.
Sizes from 5 to 200 H. P.
1 to 6 Cylinders
Kerosene
The gasoline question has been solved by the
WOLVERINE MOTOR WORKS
Bridgeport, Conn., U. S. A.


When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

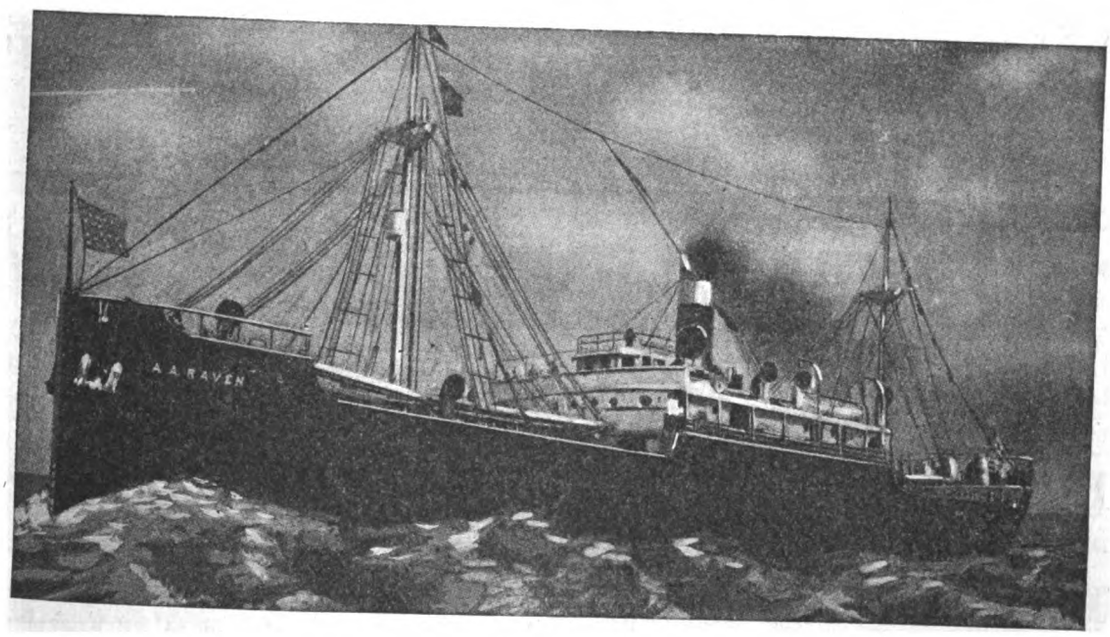
ANTONIO C. PESSANO, CHAIRMAN OF BOARD
JOHN R. RUSSEL, PRESIDENT
H. W. HOYT, VICE PRESIDENT & TREASURER
J. A. UBSDELL, VICE PRES. & GEN'L MANAGER
F. G. MORLEY, SECRETARY

Great Lakes Engineering Works



Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

More Consuls Needed for Our Merchant Marine

Since our merchant marine is rapidly outgrowing our consular service, steps are being taken immediately to provide facilities abroad for handling the millions of tons of shipping which will be afloat under the American flag in peaceful trade when the war is over. A study of this subject has been made in connection with the developing of American merchant marine; the facts are being presented to the nation so that intelligent public opinion may guide Congress when appropriations for the consular service are made.

Drydock Construction at Quebec

Special features in the construction of the drydock now building at Quebec, Canada, merit notice. The concrete retaining walls on each side of the dock are specified to be built from the natural rock surface to elevation +24, and are intended to prevent seepage through the filling. In the prism of the dock the drilling of the rock, which consisted of hard shale, irregularly stratified at an angle of about 45 degrees, was for the most part done by two well drillers, the holes being sunk down to grade and plugged for future blasting. On the west side considerable rock slides necessitated a much larger quantity of concrete for the dock wall, together with the use of rock bolts to prevent the sliding tendency of the wall.

The floor and walls of the dock are of concrete, the mixture being 1-3-5; all exposed faces are finished with a fine 1-2-4 concrete for a thickness of 6 inches. The concrete for the walls and floor was cast in alternate sections of approximately 30 feet, with expansion joints. The steps at the top of the walls are of granite, as also are the altars, the caisson stops of both entrances, and all culvert openings. The floor, 5 feet thick, is finished level from end to end, and is provided with three strips of granite slabs, 18 inches thick, intended to receive the cast iron keel and bilge blocks. The keel blocks, 4 feet 4 inches long and 2 feet 3 inches high, are each built of three pieces of castings. The middle block is wedge-shaped, so that it may be knocked out and the block removed from under a ship when in the way of repair work. The upper part of the top piece of casting is provided with a piece of white oak tenoned into the casting.

AMONG THE STEAMSHIP COMPANIES

Five of the vessels of the Union Line Steamship Company running between San Francisco and Australia are being returned to service. With the acquisition of these vessels pre-war schedules for freight and passenger service will be resumed.

The American Steamship Line is operating the Shipping Board's steamship *Zirkel* between New Orleans and Liverpool.

The United States Steamship Company has sold three Great Lakes steamships, the *Bingham, Minneapolis* and *Huron*. Between $1,000,000,000 and $2,000,000,000 are involved in the deal.

The International Shipping Company, a new steamship combine which will develop shipping trade from San Francisco to Japan, is composed of the Frank Waterhouse Company, of San Francisco and Seattle; Iwai & Company, of Kobe; I. Shii, of Kobe; Senda Barnet Company, Ltd., of Calcutta, and Suzuki & Company, of Kobe. The merger will control cargo vessels representing more than 500,000 deadweight tons.

The Harrison direct line from Tacoma to Liverpool has been resumed, according to the announcement of Guthrie & Company, Tacoma.

On February 2, J. H. W. Steele Company, of New Orleans, purchased an office building formerly occupied by the United Fruit Company's passenger and freight offices on Common street, New Orleans. On the same day the *Quistconck*, the first of ten vessels which will be operated out of New Orleans by the new Steele line, was being loaded with with cotton and general cargo for Genoa.

Firemen Needed on Government Ships

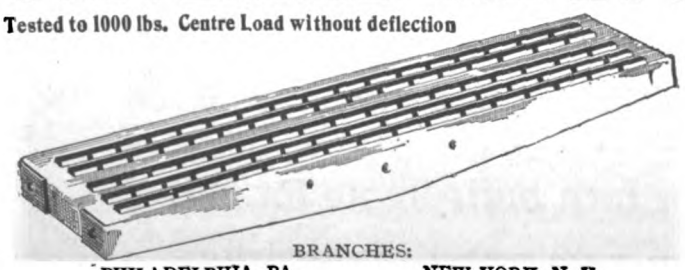
The United States Shipping Board needs 1,500 Americans at once to learn firing boilers on the new ships. The men will receive $30 a month for thirty days, and then will be sent on deep-water voyages at $75 a month. Uniform and board are furnished free.

REG'D TRADE MARK

INTERNATIONAL
COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS
In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually
Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING
INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N. Y.

STRATFORD OAKUM
QUALITY GUARANTEED JERSEY CITY and EVERYWHERE
GEO. STRATFORD OAKUM CO. - - - - - 165 CORNELISON AVE., JERSEY CITY, U. S. A.

UNIVERSAL SAFETY LADDER TREAD
Tested to 1000 lbs. Centre Load without deflection
(Girder Type with *Lead* Inserts)
FOR SHIPS
Suitable for Naval and other Vessels, and Industrial purposes.
LIGHT, DURABLE, RUSTPROOF
Universal Safety Tread Company
40 Court Street Boston, Mass.
SEND FOR CATALOGUE F.



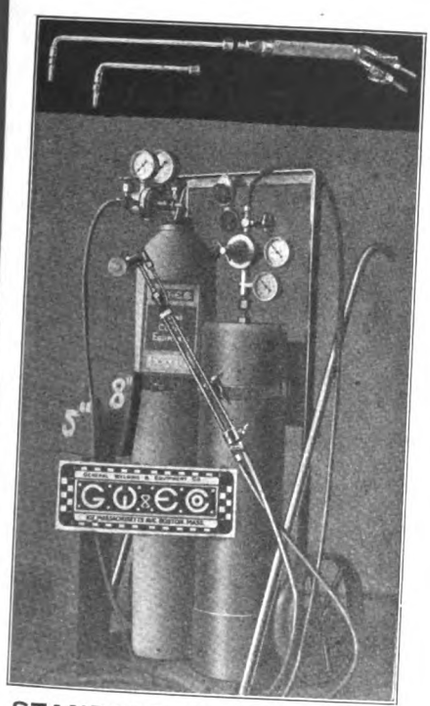
BRANCHES:
PHILADELPHIA, PA. 417 Widener Building
SEATTLE, WASH. 422 Globe Building
CHICAGO, ILL. 618 West Jackson Boulevard
NEW YORK, N. Y. 120 Liberty Street
SAN FRANCISCO, CAL. 76 Sacramento Street
DETROIT, MICH. 913 Dime Bank Building

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

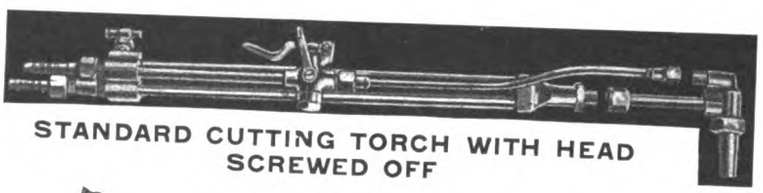
GENERAL WELDING & EQUIPMENT CO.
G.W.&E.CO.
107 MASS. AVE. BOSTON, MASS.

IN USE AT
BETHLEHEM SHIPBUILDING CORP. FORE RIVER, SQUANTUM, PROVIDENCE.
TEXAS STEAMSHIP CO.
CANADIAN VICKERS CO.
WATERTOWN ARSENAL
LORD CONSTRUCTION CO.
GENERAL ELECTRIC CO.
CANADIAN PACIFIC R. R.

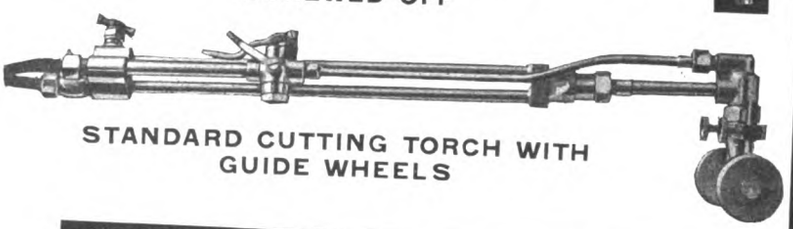
STANDARD WELDING AND CUTTING EQUIPMENT



STANDARD WELDING AND CUTTING EQUIPMENT

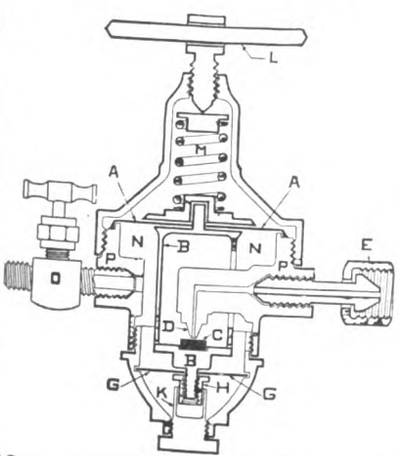


STANDARD CUTTING TORCH WITH HEAD SCREWED OFF



STANDARD CUTTING TORCH WITH GUIDE WHEELS

STANDARD WELDING TORCH WITH 3 EXTENSIONS, TO HAVE EITHER A 16-IN. LONG TORCH OR A 22-IN OR A 30-IN. LONG ONE.



DOUBLE DIAPHRAGM REGULATOR PERFECT, FORCIBLE, FRICTIONLESS ALIGNMENT; DIFFERENTIAL SPRING ACTION PRODUCED BY THE DOUBLE DIAPHRAGM (A and G) SYSTEM; QUICK, SENSITIVE AND RELIABLE REGULATION.

DESCRIPTION:

1. REGULATORS ARE OF THE DOUBLE DIAPHRAGM SYSTEM, THAT IS TO SAY, THE MOVABLE CENTERPIECE B CARRYING SEAT C IS NOT ONLY TIGHTLY FASTENED TO MAIN DIAPHRAGM A BUT ALSO WITH FITTING H TO REAR DIAPHRAGM G. THUS SEAT C IS FORCIBLY GUIDED AND RESTRICTED TO AN ABSOLUTELY STRAIGHT UP AND DOWN MOVEMENT, KEEPING ALWAYS THE SAME RELATIVE POSITION TO NOZZLE D. THE REAR DIAPHRAGM ACTS AS A FORCIBLE AND FRICTIONLESS GUIDE AND ALSO AS A QUICK ACTING DOUBLE WAY SPRING ENFORCING AN ACCURATE AND SENSITIVE REGULATION.

NO OTHER REGULATOR HAS THESE ESSENTIAL FEATURES.

2. WELDING TORCHES CONSIST OF A TORCH BASE WITH 2 EXTENSIONS TO HAVE EITHER A 16-IN. LONG TORCH OR A 22-IN. LONG ONE GIVING YOU PRACTICALLY TWO TORCHES IN ONE. A THIRD EXTENSION MAY BE ADDED TO HAVE A 30-IN. LONG TORCH. THUS ONE TORCH WITH ITS 9 TIPS IS SUFFICIENT FOR ALL POSSIBLE REQUIREMENTS.

3. CUTTING TORCHES ARE SECOND TO NONE IN EFFICIENCY, ECONOMY AND ENDURANCE. EVERYTHING IS OF THE MOST MODERN OPEN CONSTRUCTION. EACH PART CAN BE REACHED AND INSPECTED WITHOUT DELAY THE PICTURE ON TOP SHOWS A TORCH WITH THE HEAD SEPARATED FROM ITS BASE. BY LOOSENING TWO NUTS THE WHOLE HEAD COMES, SHOWING HOW EASY IT IS TO EXCHANGE EVEN A COMPLETE HEAD.

MANY THOUSANDS ARE IN CONSTANT USE.

4. EVERYTHING IN OUR CONSTRUCTIONS IS EASILY ACCESSIBLE AND EXCHANGEABLE. WITH CARRYING A FEW SPARE PARTS YOU CAN DO YOUR OWN MAINTAINING EVEN IN FAR AWAY COUNTRIES.

GET OUR CATALOGUES.

Generated on 2024-09-12 09:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Lake Vessels Subject to Heavy Duty

A large number of American ships in winter quarters at Canadian ports for repair, it is reported, will have to pay a duty of 50 percent. This expense with the added cost of repairs at Canadian ports will be a very severe handicap for the lake shipping interests if the ruling stands as it reads at present.

Shipyard Workers to Form a Council

A movement is on foot to organize the workers in the metal trades in the Atlantic coast shipyards. The organization would include workers in the yards from Maine to Mexico. A similar organization has been formed on the Pacific coast.

Technical Training for Ship Firemen

Among the training projects of the various branches of the Government that have grown out of the war is a "college" for merchant marine firemen in Chicago. Holding that the marine fireman's job is more than merely shoveling coal on a fire, the Shipping Board has prepared for intensive, scientific training of its firemen.

One aim in this training is to secure conservation of coal. It is believed that a fireman who knows the heat value of the fuel he is handling, the laws of combustion and the principles of operation of the boilers can save at least a ton of coal a week, as compared with the untrained man.

No More Wooden Ships for the Imperial Munitions Board

With the putting into service, on February 15, of the last of the forty-seven wooden ships constructed under the direction of the Imperial Munitions Board, the Dominion Government will discontinue wooden ship construction for the present.

Record of American-Made Vessels

Of the 78 vessels which are carrying food products to Europe, 72 fly the American flag. Of this number 64, aggregating 5,544,306 deadweight tons, were built by the present Shipping Board, established since August, 1917.

Special Machine for Milling Ship's Planking

A special machine for milling ship's planking, ceiling and other curved and beveled members, has been perfected by William D. Fletcher, naval architect at the yard of L. H. Shattuck, Inc., Portsmouth, N. H.

It consists of an ordinary bed and feed mechanism with a tilting vertical cutter head. It is especially actuated by hand control, so as to taper, bevel and outgage for calking in one operation. Details for milling are taken from the shell expansion plan and plotted upon the template on a reduced scale, showing width, degree of bevel and butt spacing. The template is carried on spools passing over the template table at the side of the machine, and the cutter head is actuated in accordance with pointers following the plotted lines. Data so far in hand, according to L. H. Shattuck, Inc., indicate a saving of 33 percent in man hours for planking.

British Ship Repairing as Well as Shipbuilding Now Under Private Control

Following the announcement of Lord Pirrie, that English shipyards were again open for private contracts, he mentioned that the ship repairing organization must be continued for a short time in order to avoid unnecessary congestion.

Shipowners, however, are now allowed to place repair orders through their own agents. Lord Pirrie urges, however, that English shipyards and repair docks be patronized as much as possible.

Steel Output

It is announced that the United States Steel Corporation is now producing about 100,000 tons a month. In most cases this is going into stock. It is evident from the decrease of more than 1,400,000 tons in unfilled orders over the months of December and January, that 80 to 85 percent of the operations are not the result of large orders. New business, it is reported, is slightly in excess of 30 percent of production.

SCALE

will form in boilers in spite of you or your compounds. And you spend too many days each year trying to hammer it out.

Is it not more sensible to impregnate the scale with tiny flakes of graphite, so as to make the scale brittle and easy to remove with cleaning tools? A great many engineers are saving from 50% to 75% of the former cost of boiler cleaning by using

DIXON'S
Pioneer
BOILER GRAPHITE

Safe, reliable, sensible.
Write for booklet No. 75-T.

Made in JERSEY CITY, N. J., by the
JOSEPH DIXON CRUCIBLE COMPANY
ESTABLISHED 1827

A Man Covering The Pacific Coast

Calling upon Shipbuilders, Supply Houses, etc., wishes to secure the Agency for Two or Three well-known Marine Specialties.

Address F. C. BREWER,
909 Eighth Avenue,
Seattle Washington

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Aldrich Marine Directory

1919 EDITION

Our 1918 MARINE DIRECTORY OF SHIPBUILDERS AND VESSEL OWNERS in the United States met such a long-felt want that we are publishing a new and enlarged edition which will be fully up to date.

Under Shipbuilders is a list of all builders, both of steel, wood, and concrete vessels, names of leading officials and necessary information regarding the size, capacity, etc., of each yard.

Under Vessel Owners are included names of leading officials, terminal points, dock superintendents, lists of vessels, etc.

Fully Indexed

Price $5 Postpaid.

MARINE ENGINEERING

6 EAST 39th STREET NEW YORK

Generated on 2024-09-12 08:16 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Reports compiled by the American Iron and Steel Institute show that twenty-nine companies during January produced 3,082,427 tons of steel ingots, the largest output since the record month of October, 1918.

Wooden Cargo Vessels Remain Unchartered on the Pacific Coast

Instructions have been given to the Pacific Steamship Company and the firm of Sudden & Christenson, which were to have managed ten wood vessels in transit from the Pacific to the Atlantic, that these are to be held in Pacific ports pending change of freight rates. About fifty of these vessels have been chartered on the Atlantic coast since the signing of the armistice. The rate has been $25,000 per month on a three months' basis, $23,000 on a six months' basis, and $20,000 for periods of one year or longer. It is reported that actual cost will be the basis for purchase.

New Ocean Rates

On February 13, the Shipping Board gave out a revision on ocean rates for both the Atlantic and Pacific coast service as follows: Japan, China, Manila, $12 per 2,000 pounds; Vladivostok, $25 per 2,000 pounds. Commodity rates for homeward cargoes will be established and quoted upon on application.

From the United States North Atlantic ports to Rotterdam, Antwerp, Havre and Bordeaux, $1.25 per 100 pounds, or 65 cents per cubic foot; Marseilles, Cette, Genoa and Naples, $1.60 per 100 pounds, or 85 cents per cubic foot; Barcelona, $1.85 per 100 pounds.

Rates from North Atlantic ports to Japan, China and the Philippines, $20 for close weight, $25 for all other cargo.

From South Atlantic ports the rate has been fixed at $1.07 per 100 pounds to Europe and the United Kingdom, increasing for other destinations with a maximum of $1.93 per 100 pounds to Barcelona, Spain; to Holland, $1.33; to Belgium and Italian ports, $1.68.

Navy Programme Passes House

On February 11, the House of Representatives approved the new three-year building programme of ten battleships and ten scout cruisers for the navy.

To Install Falk Gears on Submarine Boat Corporation's Vessels

In final conference with representatives of the Westinghouse Electric & Manufacturing Company, Director General Piez has made arrangements for the acceptance of twenty sets of turbine reduction gears offered by the Falk Company, of Milwaukee, Wis., to be used in outfitting vessels of the Submarine Boat Corporation in lieu of the Westinghouse gears. These sets, which will be delivered as rapidly as possible, will help speed up the outfitting of twenty-one hulls, which have been waiting for machinery at the Submarine Boat Corporation's yards for three months.

In the meantime the Westinghouse designers are correcting the defects which developed in the first gears. Westinghouse representatives report that shop tests prove that the changes already made in the gears will make them entirely satisfactory.

Foreign Trade Convention Meets in Chicago in April

James A. Farrell, president of the United States Steel Corporation, announces that the Sixth National Foreign Trade Convention will be held in the Congress Hotel, Chicago, on April 24, 25 and 26. The relation of the merchant marine to the extension of foreign trade will be discussed in several papers. For the benefit of the delegates a large amount of valuable technical information has been compiled, which is based on the experience of prominent business men in every branch of foreign trade.

Baltimore Bids for Shipping

The city of Baltimore is inaugurating a campaign to divert shipping to that port. Among the advantageous features mentioned are the following: Baltimore is 155 miles nearer Chicago and the Middle West than any other port city, which has been the reason for the

Get Bulletin 250—(250,000 Circulation)
88 Pages of Real Bargains in
RAILS Locomotives, Cars, Tanks, Machinery, Pipe, Steel Piling, etc.
ZELNICKER in ST. LOUIS "The Nation's Market Place."

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

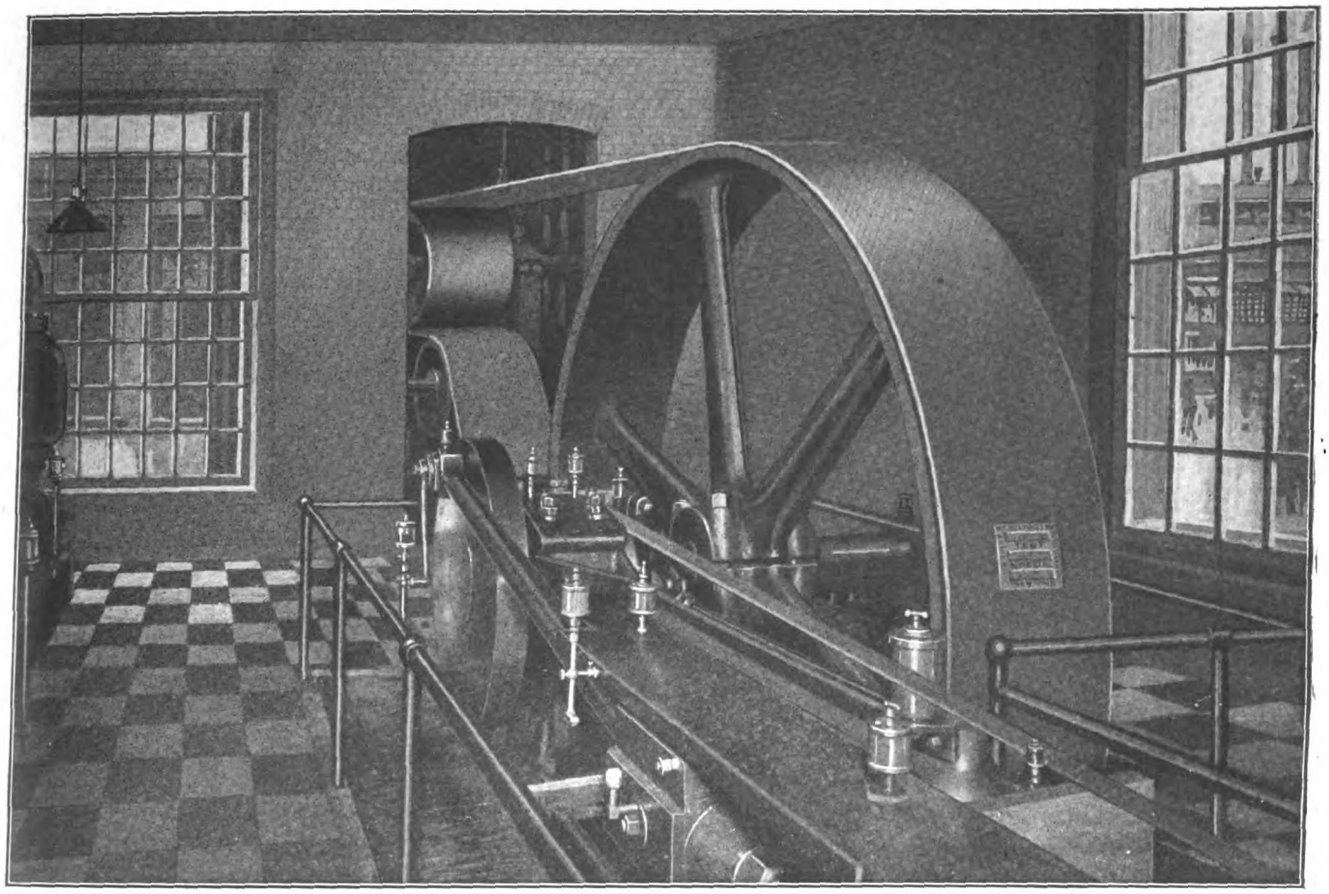
INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

Cumberland Shipbuilding Co.
SHIPBUILDING AND REPAIR PLANT
SOUTH PORTLAND, MAINE
Telephone 6936
Builders and repairers of all types of wooden vessels.
New Marine Railway of 2,500 tons capacity. Inquiries solicited for estimates, costs and dates. Most modern shipbuilding plant on the Atlantic Coast, with every facility for expeditious work. Most accessible harbor on the Coast.

OVER
350 VESSELS
(NOW BUILDING)
WILL CARRY
PROPELLERS
DESIGNED BY
THE AMERICAN SCREW PROPELLER CO.
1326-28 CHESTNUT ST., PHILADELPHIA, PA.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



THE ACCUMULATED EXPERIENCE OF SEVENTY YEARS IS BUILT INTO

"TEST SPECIAL" RUBBER BELTING

Nearly three quarters of a century of development and scientific effort directed toward creating the utmost in Belting value is the basis on which "Test Special" Belting is built.

It embodies the three essentials of good belting:

STRENGTH, SERVICE, AND ECONOMY

The sustained quality of the raw materials and workmanship insures the maintenance of a high standard of strength.

For enduring service in lumber and paper mills, machine shops, textile mills, cement plants, etc., "Test Special" has proven its worth.

It stands up in high speed work, the real measure of belting efficiency.

The "friction" surface and extreme flexibility afford great pulley grip.

By its very nature it is waterproof and unaffected by changes in temperature.

No belt dressing is required to make it do its work.

The economy of "Test Special" is in its long life and freedom from maintenance expense.

"TEST SPECIAL" Rubber Belting is a product built by the pioneers in the Mechanical Rubber Goods field which, by the manner of its making, will not fail.

NEW YORK
CHICAGO
PHILADELPHIA
PITTSBURGH
BOSTON
ST. LOUIS
SAN FRANCISCO

NEW YORK BELTING & PACKING CO.

MANUFACTURERS OF

Mechanical Rubber Goods

NEW YORK BELTING & PACKING CO. FOUNDED 1846 INCORPORATED 1856

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

decree of the Industrial Commerce Commission covering the freight differential in favor of the city; it possesses a 35-foot channel at mean low water 60 feet wide; the harbor is landlocked; no port charges of any description are permitted; three direct railroad lines connect with it; coal is delivered at Sparrow's Point at 20 cents per gross ton less than at Bethlehem, Pa.; gas and electricity are cheaply supplied. Those interested should communicate with James H, Preston, Department 22, City Hall, Baltimore.

Want Permanent Labor Adjustment Board Established

A meeting of the Administrative Council of the Atlantic Coast Shipbuilders' Association was held at the Bellevue-Stratford, on February 17, to discuss a definite plan for the establishment of a labor adjustment board to perform the same function as the Macy Board, which will automatically go out of existence on March 31. It was stated that sentiment seemed to be crystallizing in favor of establishing a Government adjustment board, to be organized with the approval of both shipowners and shipworkers to settle difficulties which may arise between them.

A report was submitted on February 12 to Vice-President Marshall by shipworkers of the various yards from Maine to Galveston, including the Great Lakes. Their programme, as summarized, called for: (1) Immediate cancellation of the pending $62,000,000 contract with Chinese yards, and $100,000,000 contract with Japanese yards, to transfer the building to American plants; (2) the continuation of a construction programme which would make America's merchant marine and navy second to none; (3) the provision that workmen from yards which may be temporarily slack in work be provided transportation to their homes and other jobs.

Manager of the Washington office of the Atlantic Coast Shipbuilders' Association, John B. Carroll, is continuously in touch with all departments of the Government and the Shipbuilding Labor Adjustment Board, and is ready to assist members of the association at all times.

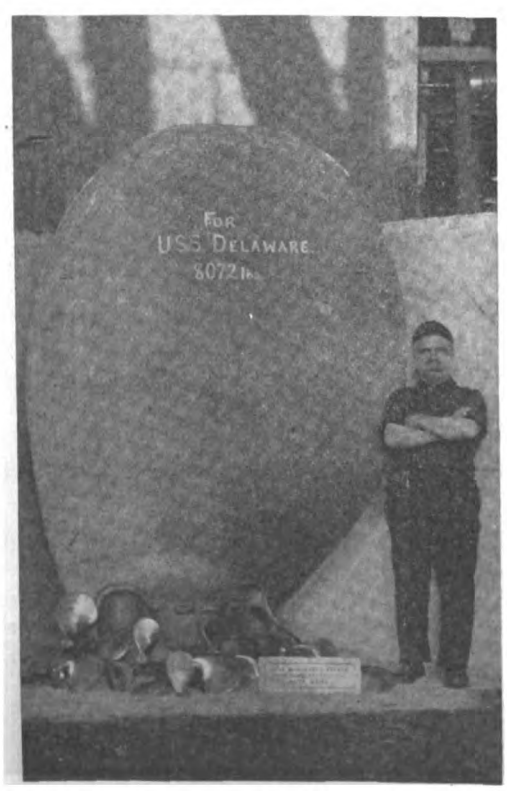
Labor Unrest During February

With the shipbuilding industry going at full speed, the labor organizations throughout the world have taken the opportunity to gain demands which, under ordinary working conditions, would hardly be attempted. On the Clyde, 20,000 men were standing out for shorter hours. In Belfast, although the workers were quite unwilling to strike, particularly those who are not new in the industry, all shipworkers were idle.

In Seattle and Tacoma conditions were much the same, the demands being proposed by the newer element. Here 25,000 men were involved, the more skilled trades, including the metal workers, inciting the action. The companies' hands were tied, since the basis of the contracts upon which the men are now working has been determined by the Macy wage agreement, to which the workmen failed to agree. In Seattle the yards lost the opportunity of repairing the *Admiral Watson*, which was sent to British Columbia, and were also unable to deliver, among other vessels, the four cargo ships purchased by W. R. Grace & Co. In Oakland, labor passed resolutions for a six-hour day, but did not act.

The East and South were also involved. The metal workers at New Orleans, 8,000 at least, finally returned to work. Coppersmiths at the Norfolk Navy yard were also dissatisfied with their present working conditions. At Savannah, disturbance was expected at the yards of the Foundation Company. In all these districts shipyard workers were scarce. Hog Island has advertised daily for fitters and other accessory workers. At Groton, Conn., although a dissatisfied employee tried to create unrest, the shipworkers kept steadily at work, as have the men in Maine.

The fact that these conditions could exist throughout the country when at least 135,000 men were unemployed, according to the figures of the United States Employment Bureau, shows that shipyard work is either distasteful to the general skilled laborer, or that unnecessary agitation is being fomented at this time. The men in the older yards have been less anxious to join in the strike, which may be an indication of their interest in the future of the industry.



HYDE

MANGANESE BRONZE

STANDARD FOR TWENTY YEARS FOR PROPELLERS

SOLID BRONZE PROPELLERS FROM 8 INCHES TO 20 FEET IN DIAMETER

BRONZE BLADES AND HUBS OF ANY SIZE

HYDE WINDLASS COMPANY
BATH, ME.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

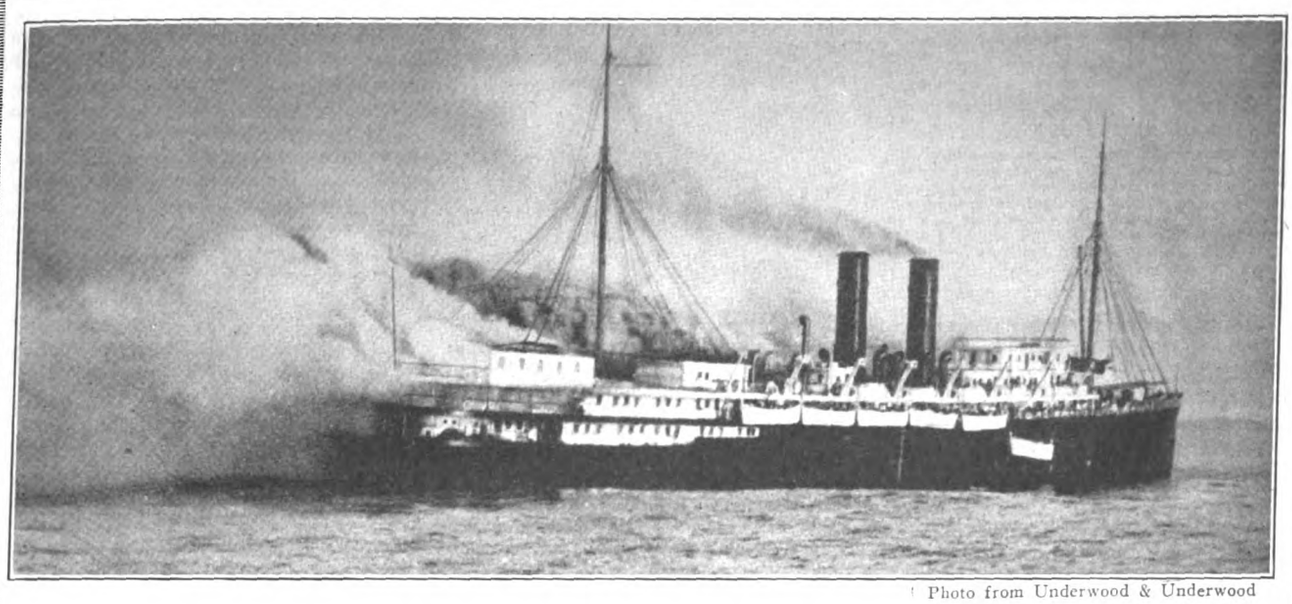


Photo from Underwood & Underwood

A New Type of Fire Protection

—AUTOMATIC—

IN reading the facts below, consider our new merchant fleet—the values, the cargoes, the lives of crews.

Automatic Sprinkler protection has never been largely installed on shipboard because of certain vital objections raised by ship owners and naval architects. A new type of system, however, has been designed by our engineers which seems to meet all previous objections to this type of protection.

This new System is Dry Pipe, and is still Automatic.

Water cannot be discharged on account of any accident to the piping system or the sprinkler heads.

But water is instantly discharged in case of fire without any human aid.

This new type of system makes a great advance in the art of automatic fire protection aboard ship.

Had such system been installed on the S. S. Congress shown above, a heavy property loss would have been prevented, because the Grinnell System would have automatically started fighting the fire as soon as it started.

The type of fire protection that has reduced factory fire risks to practically nothing is now available to the ship owner. Send for our special Bulletin giving greater details of this system. We are glad to submit plans, estimates and proposals, without cost or obligation.

Address Marine Department, General Fire Extinguisher Co., Providence, R. I.

GRINNELL
AUTOMATIC SPRINKLER SYSTEM
The Factory-Assembled System

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

Wanted—Several first-class marine, piping and detail draftsmen. Apply *Terry Shipbuilding Corporation*, Savannah, Ga.

Assistant Naval Architect, with firm building 50,000 D. W. tons per yard, desires inside position with substantial yard on West Coast. Address *West Coast,* care of MARINE ENGINEERING.

Draftsman Desires Change — Has had fourteen years' varied experience, as follows: Gasoline engines, tool work, automatic machinery and hull, mechanical. Address *Box* 57, care of MARINE ENGINEERING.

Hull Draftsman, with nine years' experience in naval and merchant work, desires position. West Coast or Japan preferred. Scientific or structural. Two years' supervisory. Address *Box* 156, care of MARINE ENGINEERING.

Wanted—Experienced marine engine draftsman, permanent position. Apply by letter only, stating age, nationality, experience, salary wanted, married or single, *Power Specialty Company,* 111 Broadway, New York.

Naval Architect of twenty years' experience has facilities, and can devote part time to ship design, plans or appraisal, or represent shipping or shipbuilding interest in vicinity of Philadelphia. Address *Box* 210, care of MARINE ENGINEERING.

We want to buy volumes and copies of INTERNATIONAL MARINE ENGINEERING, American Society of Naval Engineers, Society of Naval Architects, U. S. Naval Institute, Rudder, etc. *International Magazine Company,* Elizabeth, N. J.

Mechanical Engineer, with twelve years' experience on marine work, desires change. Employed with Shipping Board since war started, but wishes to return to commercial work. Particularly experienced in the design of reciprocating, steam and Diesel engines and auxiliaries. Graduate of leading university, in both mechanical and electrical engineering. Address *Commercial Work,* care of MARINE ENGINEERING.

For Sale—Tug W. H. Williams. Iron hull, 90′ x 19′ x 10′; boiler, 10′ 6″ x 12′ 6″; engine, 15 x 28 x 22; bunker capacity, 25 tons. Equipped with condenser, steam steering gear, two steam capstans; electric lights throughout. Entirely rebuilt in 1917 and in first-class condition. Address *Tug,* care of MARINE ENGINEERING.

For Sale—Two 360-H. P. Duesenberg Marine engines, new, 8 cylinders, 6¾″ x 7¾″, each $5,000. Also a 72-foot new motor boat, equipped with three of these engines; speed 35 miles an hour; cost $52,000. Our price, $35,000. Address *Engines,* care of MARINE ENGINEERING.

Executive Engineer, experienced in entire charge of hull and machinery, plant layouts and equipment, superintendence and erection. Good references; go anywhere. Responsible position only. Address *Box X,* care of MARINE ENGINEERING.

Naval Architect and Marine Superintendent, graduate; five years' ship drafting, two years' steel ship construction, twelve years' supervising work in ship drafting office and shipyard, open for permanent engagement. Address *Box* 630, care of MARINE ENGINEERING.

There is not a shipyard in this country that is managed and operated on the principles that have been proved sound in the most successful industrial and manufacturing concerns. I can solve your shipbuilding problems. Big production at low cost. Address *Shipbuilder,* care of MARINE ENGINEERING.

Young Man, aged 24, with technical education, five years' experience as engine draftsman, estimator and charge man, now employed in Gulf Coast yard as chief draftsman, is open for position with East or West coast yard. Holds first assistant engineers' license. Is married. References. Address *Gulf Coast,* care of MARINE ENGINEERING.

Construction Engineer—Young man, graduate engineer, seven years' structural engineering experience. For the past two years in responsible position for the United States Navy Department in one of the large Eastern shipyards. Thoroughly acquainted with detail, purchasing and inspection work of engineering materials. Highest references. Address *Construction,* care of MARINE ENGINEERING.

Marine Refrigeration — All-around Engineer, Practical and Technical, with many years' experience, marine (and land), with leading British firms, CO_2 and NH_3 systems, and all classes of cargo and provision carrying, who have ORIGINATED CO_2 refrigeration with British firm, desires post with American engineers to commence refrigeration in new shipbuilding. Can carry job through, *i. e.,* estimation, design (on blank sheet, not copy), manufacture, erection, running, etc. Address *Marine Refrigeration,* care of INTERNATIONAL MARINE ENGINEERING, 8 Bouverie street, London, E. C. 4.

We Want Three Live Salesmen—One for each of the following divisions of our business: One man to represent us in the shipbuilding and ship chandlery trade; another to look after the export trade in New York City, and one calling on the heavy hardware jobbers. These three men must have the confidence of the principal buyers in their respective line and experience to guide them in locating customers who are in the market for our product. We will assist them by carrying full-page advertisements in three of the most far-reaching trade journals in the country, together with a direct mail appeal. If you are connected with a reputable house we want you to represent us on a commission basis, selling our product as a side line. Address *Tackle Block Manufacturer,* care of MARINE ENGINEERING.

The McCabe Pneumatic Flanging Machine is the subject of a bulletin published by the McCabe Manufacturing Company, Lawrence, Mass. "Make your shop more efficient and more dependable. Get away from the old-time and unreliable method of hand flanging by installing a McCabe pneumatic flanging machine. The McCabe will flange sheets cold ½ inch or under in thickness. This feature saves lost time waiting for heats—insures maximum production per man unit. With only two men, this sturdy and powerful machine will flange six complete locomotive flue sheets in one day—and they are flanged mechanically correct, too. With a McCabe in your shop you need have no thought of important work being held up on account of workmen laying off. The McCabe is always on the job. May we describe some comparative jobs?"

The Value of the Automatic Compensator, made by the Electric Controller & Manufacturing Company, Cleveland, Ohio, is explained in a bulletin just issued. "A great many machines are only in actual operation part of the day. This applies to emery wheels, circular saws, etc. There is no one selected to start and stop these machines every time they are used. As a result they generally run during the working hours. With the EC&M Automatic Compensator the push button can be mounted on the machine or controlled by a foot pedal, and anyone can start and stop the motor. A plant had one large room with a number of operators working at machines, all of which were driven by one motor. Once in a while a belt came off or some accident occurred, and it was necessary to send for a mechanic, and after that for the plant electrician to start the motor. As soon as the EC&M Automatic Compensator was installed, push buttons were located at various points around the room. The motor can be started at only one push button, but can be stopped at any push button."

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Armco" Iron Filler Rods for welding sheet metal parts are described in a circular issued by the Page Steel & Wire Company, 30 Church street, New York. "The economic saving and desirability of welded seams and fittings over the older method of riveting is now beyond question. The Electric Welding Committee of the United States Shipping Board conservatively estimates the saving on hull plating and other vital ship parts at 25 percent. On minor ship parts the labor saving is estimated to be from 60 to 70 percent. In the manufacture of boilers, plate shells, pressure containers, sheet metal pipe and the like, the saving in time, labor, material, the reduction in weight, etc., all indicate that welding is the approved construction for the future. Armco Iron is a particularly desirable filler for welding seams of and attaching fittings to sheet metal surfaces and containers for the following reasons: 1. Uniform purity and metal structure that produce welds of the highest efficiency and permit the standardization of repetitive welding operations with absolute reliability of the finished welds. 2. Free flow and action under heat, that make the operative's work easy and give him greater confidence. 3. The standardization of one metal composition in two tempers to meet all ordinary iron and steel requirements. Armco iron rods for oxy-acetylene are the same as for electric welding except the temper, which for electric is harder to work equally well under the higher temperatures. 4. Readily obtainable in all popular sizes from conveniently located supply depots in all industrial centers. Write for a trial shipment, and if you want free advice on welding subjects, your questions will be answered by engineers who have made welding a life study, and who know from first-hand experience what is being done in this line."

Correct Illumination is the subject of a bulletin just published by J. Livingston & Company, Grand Central Terminal, New York. "We show herein various designs of lighting fixtures and reflectors, selected as a result of many years' careful and patient investigation and experience as constructing engineers, designers and manufacturers of electric light and power systems. The fixtures and reflectors shown are specially designed to correctly illuminate factories, mills and all types of industrial buildings. The shape and size of every reflector has been decided upon after careful study from the standpoint of efficiency, durability and perfection in design. The material used in their manufacture is highly tempered steel porcelain enameled, which is a permanent and durable finish, not being affected by heat, cold or the most rapid change in temperature. The importance of this, especially as it applies to the white enameled reflecting surface, cannot be overestimated. It does not crack, peel or become discolored. It can be washed, scoured and cleaned in the most rigorous manner possible without fear of injuring the enameled surface. It is quite impossible to do this with any other surface finished reflector without destroying its high reflective powers."

Rome Hollow Staybolt Iron is described in a circular issued by the Rome Iron Mills, Inc., 30 Church street, New York. "Rome Hollow is an iron that is made hollow at the right time—when the iron is made. Bars are rolled to standard length—12 to 16 feet. You make your own staybolts for each job in the old economical way. Rome Hollow is rolled by the Jenkins patented process. The same men, the same mill, give it the Rome superior quality you've known for fifty years. And remember, every bar is guaranteed."

The "Universal" Ladder Step, described for use on shipboard, is described in a circular published by the Universal Safety Tread Company, 40 Court street, Boston, Mass. "This ladder step is designed for use on shipboard for all types of naval and merchant vessels wherever an all-metal self-supporting safety tread step, suitably reinforced, is required, as well as for industrial purposes, power house or engine room stairs, and all other similar situations. It combines four most essential features —non-slip efficiency, strength and stiffness, light weight and rust-proof advantages."

CHIEF ENGINEER

of one of the largest structural fabricating plants in the South desires permanent connection with large shipbuilding plant or large construction company doing war work. He is also manager of an engineering firm doing consulting work for industrial plants, bridges and miscellaneous steel and reinforced concrete structures. He is 36 years of age, married, graduate civil and mechanical engineer, and has had over 15 years' broad experience managing and engineering large undertakings; is familiar with finance, accounting and efficient organization. Has been connected with the U. S. Government over three years. Salary $9,000 to $12,000 per year, depending on scope of work. Address, Box 215, care of Marine Engineering

FOR SALE

Two (2) New Roberts Safety Water Tube Boilers 10 feet by 10 feet—63 square feet grate surface, immediate delivery—British Lloyds Classification. For price and full particulars apply to Liberty Steamship Company, 17 State Street, New York City.

WANTED: A REAL SHIPYARD MANAGER

¶ One of the best wooden shipyards in the South desires the services of a man as Vice-President or General Manager, who is capable of taking entire responsibility for the successful operation of the business.
¶ The man wanted must be an Executive; must know how to figure costs and really know something about the business of building wooden ships by up-to-date methods.
¶ For the right man there is open an unusual opportunity, including an interest in the business.
¶ All letters will be considered strictly confidential.

Reply to Southern Shipyard, care of Marine Engineering

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Lukens Steel Company, Coatesville, Pa., was the first to make boiler plates in America. This company has recently issued a circular from which we quote as follows: "Our new 204-inch mill, the largest mill in the world, is now in operation. We can furnish plates up to 190 inches in width. Change your designs by cutting out seams and take advantage of these widths. Can furnish 15-foot O. D. flange heads in one piece. Lukens steel is the leader for boilers and fireboxes of all types. One hundred years' experience. O. H. basic or acid, tank, bridge, structural and special specification steel. All plates straightened by specially patented rolls. Lukens 'Best Yet' manhole fittings. Our new patented manhole cover plate beats them all—no through riveted bolts. Meets all requirements of Steamboat Inspection rules. Every shop should have them in stock. Lukens flanging tops them all. Our flanging department is fully equipped with the best and latest machinery for turning out heads for all kinds of work. All sizes of flue holes. Can furnish irregular flanged heads by machinery, thus giving superior finish to the best hand or usual method of doing this class of flanging. Send in your inquiries and see what we can do. The Huston patent boiler brace is acknowledged by mechanical experts to be superior to any other brace on the market in quality, strength, lightness in weight, workmanship, general appearance and finish. Send for circular giving tests made."

Cutting Special Flue Sheets and flanges with a Davis-Bournonville radiograph and oxy-acetylene flame is described and illustrated in a circular issued by the Davis-Bournonville Company, Jersey City, N. J. "These 30-inch diameter flue sheets and 45-inch diameter flanges of 2½-inch plate were for special heaters required by the U. S. Government. Length of heaters, 11 feet 6 inches; diameter, 30 inches, each heater containing 85 tubes, 1½ inches in diameter. Oxy-acetylene welding and cutting with Davis-Bournonville apparatus was extensively employed to insure results not obtainable by riveted construction. Longitudinal seam of shell was welded, heads were welded to shell, and the 85 tubes welded into the heads or flue sheets. When finished, heaters were tested to 280 pounds hydrostatic pressure. The cutting of the heads and flanges by the radiograph constituted a large element of time saving and cost saving. The radiograph is an exclusive Davis-Bournonville development, and many of them are employed in steel mills, fabricating plants, shipyards and United States navy yards. Davis apparatus combines the widest and most complete range of equipment for oxy-acetylene and oxyhydrogen cutting and welding, including acetylene, oxygen and hydrogen generating and compressing systems, mechanical cutting and welding apparatus, hand cutting and welding outfits—portable and stationary, field and shop equipment. It leads the world in range, efficiency and number of successful users. Adopted by the United States army and United States navy yards. Apparatus and supplies for the largest installations or for the one-man outfit, of equal efficiency.

"The Chief Consideration in the Selection of Boiler Tubes is Durability," according to a bulletin published by the National Tube Company, Frick building, Pittsburgh, Pa. "The chief consideration in the selection of boiler tubes is durability—whether taken from the standpoint of durability under severe operative conditions, long usage, corrosive influences, or under the 'punishment' naturally received when beaded and rolled in the flue sheet. National lap-welded boiler tubes and Shelby seamless boiler tubes represent the highest standards of durability, because durability is the watchword of every man in the National Tube Company organization concerned with their manufacture. This striving to produce durable tubular products first manifests itself in the selection of high-grade ore, continues with the smelting and refining of the metal, is evidenced in the special manufacturing processes (such as Spellerizing, which minimizes any tendency to corrosion), and is concluded only when the tube successfully passes the final test and inspection before shipment. A high factor of durability has had much to do in establishing National and Shelby boiler tubes as the recognized standards of boiler tube quality."

FOR SALE

Triple Expansion Marine Engine 18″ x 32″ x 54″—42″ stroke, complete with jet condenser. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾″ stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

WANTED NAVAL ARCHITECT

For Large Steel Ship Building Plant (North Atlantic Coast)

Qualifications required:

1. **Extensive experience with responsible positions in steel shipyards.**
2. **The applicant must be very familiar with the various classification Society rules and methods.**
3. **The particular duties are: To have charge of ordering material of every description entering into the construction of hulls, machinery and outfit, as well as to supervise the Chief Hull and Engine Draftsmen. Consequently, a thorough knowledge of the character and sources of supply of various items, such as auxiliary machinery, outfit, miscellaneous fittings, etc., is essential.**
4. **Only first-class all-around experienced men who are "live wires" in every sense of the word need apply, and when doing so, please state complete particulars of experience, such as positions held, salary expected, etc.**

Address
Box 704, care of Marine Engineering

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Wire Rope Tackle Blocks are the subject of a booklet published by the Hudson Block Company, 149 Broadway, New York. "Hudson wire rope tackle blocks have the distinction of scientific distribution of strength, combined with quality and workmanship, produces a factor of safety enabling us to stake our honor on our products."

The Record of "85% Magnesia" in America's War Fleet is the title of one of the bulletins published by the Magnesia Association of America, 721 Bulletin building, Philadelphia, Pa. "The navy is always reticent as to its achievements, but gradually its part in the great war is becoming known. Little by little we are learning how America's ships and American sailors were responsible for the downfall of the submarine and the final surrender of the enemy fleet. When the full story can be told, it will be found also that '85% Magnesia' has fully maintained its reputation as the national coal saver and defender of steam. Every one of Uncle Sam's huge battleships, every American transport, and every destroyer has its pipes and boilers protected against heat leakage by an impenetrable armor of '85% Magnesia.' In the arctic weather of stormy Northern waters, amid snow and ice that often covered the decks and sides of the vessels for days at a time, through days of dark Atlantic gales, the fleet never failed in its mission, nor did the '85% Magnesia' covered pipes and boilers fail to deliver a plentiful supply of hot, dry steam to the engines."

A Medium-Heavy Duty Marine Motor is illustrated in a bulletin just published by the Knox Motors Associates, Springfield, Mass. "The Knox 40-H. P. marine motor is the latest product of a company whose engine building experience dates back for eighteen years. In its design and construction are embodied features that are the results of a careful study of the requirements of a successful marine motor. The materials entering into its construction have been selected with a view to giving maximum service with the minimum of attention. Alloy steels, special aluminum, bronze and iron alloys are used throughout, revolving parts are heat treated and ground to size with a glass-like finish. All rotating and reciprocating parts are carefully balanced. In fact, nothing has been left undone to produce the most perfect engine possible. We would call to your attention the full-pressure oiling system, which not only lubricates the entire motor but the reverse gear with all its bearings as well. No grease cups to bother with; the oil screen and adjustable by-pass are located above the engine ways; large hand holes in side of the case; two independent ignition systems, each with its own set of plugs; hot spot manifold, fully water-jacketed; separable cylinder heads, easily removable to permit of inspection and valve grinding; large reverse gear case cover permits access to any part of gear or its bearings."

Electric Traveling Cranes. — The Milwaukee Electric Crane & Manufacturing Company, Milwaukee, Wis., has issued a bulletin on the Milwaukee Crane. This bulletin shows a number of photographs of detail parts, as well as complete cranes and installation views. It also explains in detail a number of very decided improvements in crane construction.

Marconi Wireless Apparatus is described in a bulletin issued by the Marconi Wireless Telegraph Company of America, Woolworth building, New York. "Did you know that you can now rent or buy Marconi wireless apparatus —or buy it and still secure Marconi service? You can. So whatever the conditions you face you can enjoy the economy and safety and efficiency of wireless on your vessels and with the added and special advantages which only Marconi Wireless can give you. If you buy Marconi apparatus outright, you get the latest product of the world's leader in this field. If you contract for Marconi service under either rental or sales plan, you find every detail of operation charted for you; and wherever possible every burden or responsibility is transferred from your shoulders and pay roll to ours—all at a surprisingly modest fee. We will be glad to give you definite solutions of all wireless problems now, and we believe every shipowner will be interested in the details of our plan, sent gladly upon application to our nearest office."

WANTED

To Purchase, Bound and Unbound Volumes of

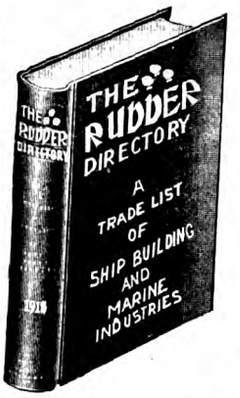
MARINE ENGINEERING

for the years 1912-13-14-15-16-17.

Address, giving price asked,

"E. L. S."

care of MARINE ENGINEERING



Now Ready

The Rudder Directory

A Trade List of Shipbuilding and Marine Industries

Over 7,500 Firms Listed

Shipbuilders, ship owners, insurance companies, brokers naval architects, boatbuilders, etc.

There are 1,154 names of shipbuilders and repair plants; of these 179 are steel shipbuilders, 573 wooden shipbuilders and the others are composite and concrete builders and repair plants.

The officers, managers of the plants and purchasing agents are given in the detail of these firms. Then there are 1,899 owners or operators of vessels and more than 4,000 names and addresses in the classified list of manufacturers.

This list makes the Directory of inestimable value to the Purchasing Agent, as it shows the buyer where he can go for anything he needs from a wire nail to a big forging or casting.

The price of The Rudder Directory bound in cloth is $5.00, postage paid

THE RUDDER PUBLISHING CO.

11 MURRAY STREET - NEW YORK

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Thor" Universal Electric Drills are described in a bulletin just published by the Independent Pneumatic Tool Company 600 West Jackson Boulevard, Chicago, Ill. "Indispensable for all kinds of drilling, reaming and wood boring in the building of automobiles, steel and wood cars, boilers, auto bodies, and in railroad and structural shops, ship and drydock work and machinery repairs. The superpower motor is designed especially for the Thor drill, and possesses certain distinctive features resulting in extra power. It is absolutely impossible to stall a Thor drill on any work up to its full rated capacity. They will develop greater power than other drills weighing several pounds more. An aluminum crankcase on the small sizes insures lightness and convenience in handling and operating. The Thor is the only portable electric drill made with ball and roller bearings throughout, reducing friction to a minimum and increasing the efficiency."

Automatic Sprinkler Protection on Shipboard is the subject of a special bulletin published by the Marine Department of the General Fire Extinguisher Company, Providence, R. I. "Automatic sprinkler protection has never been largely installed on shipboard, because of certain vital objections raised by shipowners and naval architects. A new type of system, however, has been designed by our engineers which seems to meet all previous objections to this type of protection. This new system is dry pipe, and is still automatic. Water cannot be discharged on account of any accident to the piping system or the sprinkler heads. But water is instantly discharged in case of fire without any human aid. This new type of system makes a great advance in the art of automatic fire protection aboard ship. The type of fire protection that has reduced factory fire risks to practically nothing is now available to the shipowner. Send for our special bulletin giving greater details of this system. We are glad to submit plans, estimates and proposals without cost or obligation."

Chadburn Ship Telegraphs are the subject of a catalogue published by the Chadburn (Ship) Telegraph Company of America, Troy, N. Y. "The company's plant at Troy, N. Y., is manufacturing all ship telegraph material, engine counters, speed indicators, etc., for the mercantile service, the same as the works in Liverpool, England. We also have a Navy Department manufacturing special instruments for the United States Navy identical with the material manufactured by the Liverpool plant for the British Admiralty. The completeness and location of our factory assures prompt deliveries. We are prepared to give estimates for complete installations."

The Wilson Plastic-Arc Welder for use in shipyards and on board ship is described and illustrated in a circular just issued by the Wilson Welder & Metals Company, Inc., 10 Rector street, New York. "The splendid success of the Wilson Plastic-Arc welder in the repair of the German ships has started a general discussion of the advisability and practicability of adopting this method of welding for manufacturing purposes. A special meeting of the technical committee of Lloyd's Register of Shipping was recently held in London to consider this subject in connection with shipbuilding to the extent of eliminating by this method the use of rivets for important structural connections. The Wilson Plastic-Arc welder is as well adapted to manufacturing purposes as it is to repair work. It is very economical in operation, can be used to good advantage in the welding of metal parts of any character. It is also, of course, a ready-repair tool in the case of breakage or damage to cast iron cylinders, valve chests, pipe lines, engine bases and parts. Successful welds can be made in the open or in cramped, confined spaces—anywhere a man and a wire can go. All successful welding depends upon a constant uniform temperature at the weld. The more nearly constant the heat the better the weld. A steady, uniform, predetermined heat is always automatically maintained in Wilson Plastic-Arc welding."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

AMERICAN ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 308 Vine St., Camden, N. J.

THE AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 5921 Walnut St., Philadelphia, Pa.
Vice-President—W. A. Leavitt, Jr., New York Shipbuilding Corporation, Camden, N. J.
Secretary—B. G. Barnes, 1596 North Ave., Bridgeport, Conn.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.

MARINE ENGINEERS' BENEFICIAL ASSOCIATION NATIONAL OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Bienville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

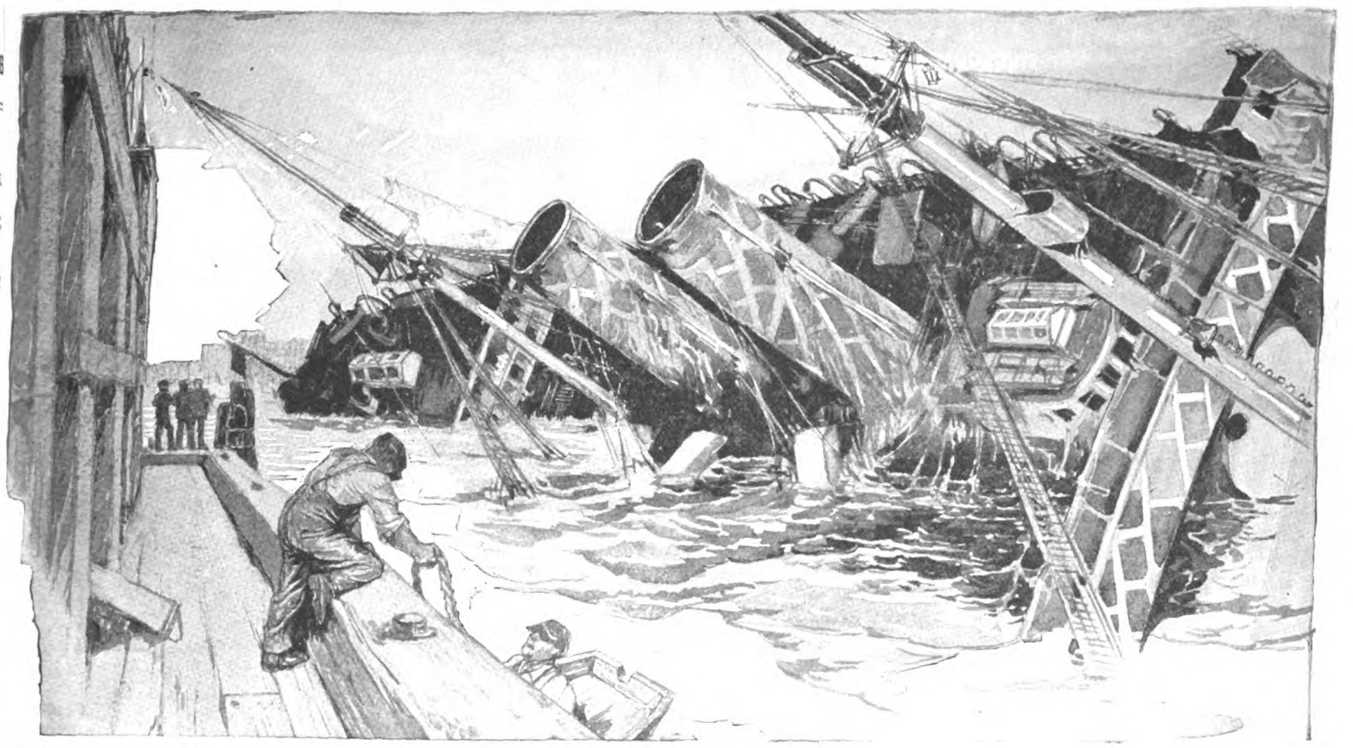
INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

INSTITUTE OF MARINE ENGINEERS, INCORPORATED
The Minories, Tower Hill, London.

The
Shipbuilders' Hand Book
by Harrison S. Taft
Price 15/-
For sale by
BENN BROS., Ltd.
8 Bouverie Street, London, E. C. 4

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



When the St. Paul capsized— Her "85% Magnesia" Coverings Were Unharmed!

When the staunch American liner "St. Paul" sank in New York harbor just before she was to sail for France it took four months to raise her and to pump the mud and water from her engine rooms and holds. Then it was discovered that the only equipment of her boilers and pipes that was wholly free from damage *was their heat-insulating coverings of "85% Magnesia."*

A quarter of a century of continuous, exacting service had not impaired in the least the heat-saving efficiency of these "85% Magnesia" coverings. *Nor had four months of continuous soaking at the bottom of the harbor impaired them in any way.*

These coverings are still in use. No more strenuous test of the durability and unimpaired efficiency of any heat-insulation was ever made.

Those two outstanding properties of "85% Magnesia"—DURABILITY and EFFICIENCY—have made the standard heat-insulation wherever the highest standards of service are required.

Where You Find It

The U. S. Navy has specified "85% Magnesia" for its Fleet since 1888 and the U. S. Shipping Board followed suit. The greatest steamships and strongest tugs are protected by it. Our powerful locomotives are "lagged" with it under their iron jackets—to hold their steam.

The largest power-plants and many thousands of factories use it to maintain their high-pressure.

For outdoor service in zero weather, in places where dampness, leakage, ice, and even occasional floods would ruin a poorer insulation, this "85% Magnesia" covering has never failed in maximum efficiency and durability.

For Heating, the biggest steamships, hotels, public buildings use "85% Magnesia" to carry the heat where it belongs and to save coal. In innumerable residences it insures even heat and cuts coal bills enormously.

For two years the Mellon Institute of Industrial Research of Pittsburgh University has been conducting experiments to prove the definite degree of its efficiency under varying conditions of temperature and pressure. A Table of the Monthly Coal Savings in Dollars and Cents has been prepared by this Institute, and the Magnesia Association will mail it to you for the asking. Also the illuminating book, "Let '85% Magnesia' Defend your Steam." If you are an engineer or architect, ask us for the Specification for the scientific application of "85% Magnesia," compiled and endorsed by the above Institute.

MAGNESIA ASSOCIATION of AMERICA

721 Bulletin Bldg. Philadelphia Penna.

Executive Committee, Wm. A. Macan, *Chairman*

George D. Crabbs, The Philip Carey Co. . . Cincinnati, Ohio
Alvin M. Ehret, Ehret Magnesia Mfg. Co., Valley Forge, Penna.
J. R. Swift . . . . The Franklin Mfg. Co., Franklin, Penna.
R. V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Penna.

Copyright, 1919, M. A. of A. Permission to reprint by application.

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Germany Claims 4,700,000 Tons of Shipping

According to figures published in the *Cologne Gazette*, Germany still claims to be owner of 3,700,000 tons of merchant shipping, in addition to 1,000,000 tons constructed during the war. Of this total it is stated that 2,250,000 tons are in Germany or in the immediate neighborhood, with 750,000 tons or more untouched in neutral countries, and that 625,000 tons are temporarily confiscated by neutrals.

Italy Builds Seven Large Liners

Three vessels of about 12,000 gross tons each are now under construction at the yards of the firm of Gio. Ansaldo & Company. The company also contemplates the building of four vessels of about 20,000 gross tons each, designed to make 20 knots.

Bridgeport, Conn., Plans Huge Harbor Development

The Chamber of Commerce, Bridgeport, Conn., has issued a report regarding harbor improvements in that city as recommended by Engineer Lindon W. Bates, who was retained to make a special survey.

He advised that the stretch of meadow between the mouth of the Housatonic River and the present Bridgeport harbor be utilized for the building of large manufacturing plants and for the new port development, the port operation to commence with the dredging of a channel and turning basin, and the construction of a rail line to the New York, New Haven & Hartford Railroad. It would first be practical, Mr. Bates reported, to build one pier on this site, to be supplemented, as rapidly as business demanded, by two other piers large enough to handle 9,000-ton steamers drawing 30 feet of water.

Mr. Bates has also recommended the development of the Black Rock section, which would necessitate the construction of two breakwaters, and would necessarily be more difficult of development than the previous site. It was emphasized that with the development of these facilities Bridgeport could handle part of the export and import trade which now passes through the New York harbor, and could also handle bulk freight which could be diverted to that port from the Poughkeepsie Bridge.

A temporary draft covering the financing of the port development has been submitted to the Connecticut Legislature, under the name of the "Port of Bridgeport Bill," which provides for the co-operation of the interested residents of Bridgeport and Stratford as stockholders in the new enterprise.

The following men have been appointed as the first board of Port Commissioners: Lieut.-Gov. Clifford B. Wilson, T. J. Pardy, Pardy Construction Company; Judge Howard W. Curtis; Sumner Simpson, president, Raybestos Company; Walter B. Lasher, president, American Chain Company; Samuel P. Senior, Bridgeport Hydraulic Company; George E. Crawford, former president, Bridgeport Chamber of Commerce, and Harold C. Lovell, town clerk of Stratford.

American Welding Society to Be Formed

A new association, to be known as the American Welding Society is being formed through a merging of the Welding Committee of the Emergency Fleet Corporation and the National Welding Council. Other men interested in the application of welding to shipbuilding, and, in fact, to all manufacturing processes, are also included in the new society.

Scientific societies and experts in all the welding fields will be brought together to aid in the maintenance of a Bureau of Welding, which will be a separate organization, designed to carry on research and aid in the standardization of welding as a process.

The organization, through its dues will provide funds for research, will superintend the carrying on of research, advance the training of expert welders, and serve as a medium to accomplish advantageous legislation and suitable publicity for the work.

The first meeting of the society will be held on Friday, March 28, at the Engineering Societies' building, 33 West Thirty-ninth street, New York.

"THINK"

What is a ship without an efficient propeller
Why are all propellers not efficient
How can high propulsive efficiency be obtained
Why are so many Engineers unfamiliar with propellers
What are the qualifications for designing propellers

WRITE FOR ANSWERS TO ABOVE QUESTIONS

WE HAVE DESIGNED PROPELLERS FOR

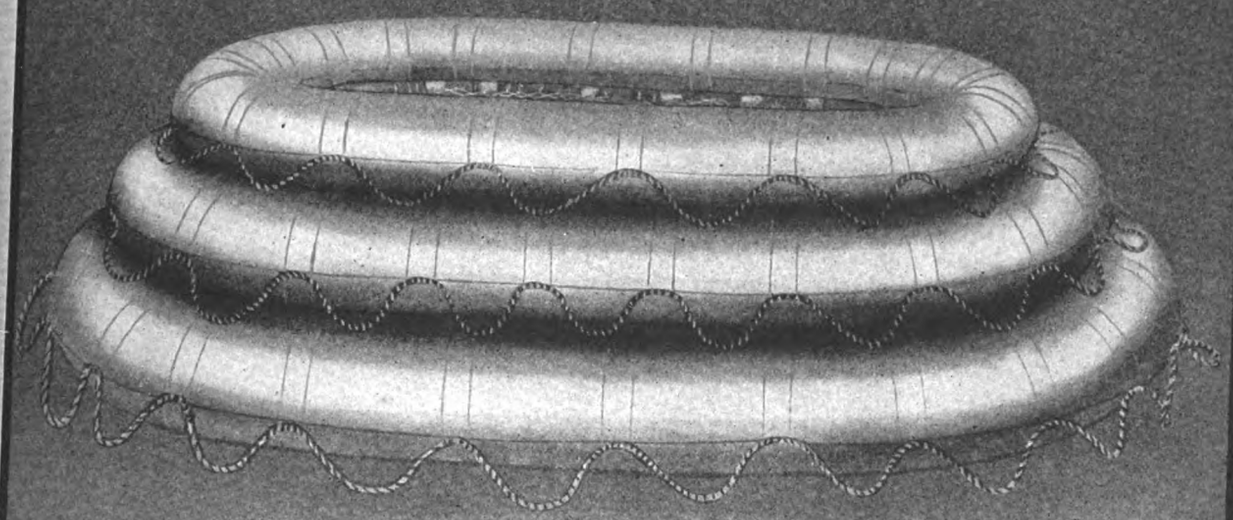
Union Plant. (Beth. Shipbuilding Corp.)
Fore River Plant (Beth. Shipbuilding Corp.)
Sparrows Point Plant (Beth. Shipbuilding Corp.)
Skinner & Eddy Corp.
Newport News Shipbuilding & Drydock Co.
Great Lakes Engineering Works.
Seattle Construction & Drydock Co.
American Shipbuilding Co.
J. F. Duthie & Company.
Pusey & Jones Co.
Pennsylvania Shipbuilding Co.
George Simpson.
Gielow & Orr.
Cox & Stevens.
The late Geo. W. Dickie.
Los Angeles Shipbuilding & Drydock Co.
Peninsula Shipbuilding Co.
Chas. Ward Engineering Works.
Canadian Vickers Co., Ltd.
Erickson Engineering Co.
Albina Engine & Machine Works.
New London Ship & Engine Co.
Standard Shipbuilding Corp.
The Portland Co.
Tank Shipbuilding Corp.
Swasey, Raymond & Page Inc.
The late W. I. Babcock.
Skandia Pacific Oil Engine Co.
August Mietz Corp.
New Jersey Shipbuilding Co.
J. Coughlan & Sons.
Collingwood Shipbuilding Co.
Northwest Steel Co. (Willamette Iron & Std. Wks
Moore Shipbuilding Co.
Baltimore Drydocks & Shipbuilding Co.
Submarine Boat Corp.
Merchant Shipbuilding Corp.
Federal Shipbuilding Co.
Supple & Ballin Shipbuilding Co.
Ames Shipbuilding & Drydock Co.

AMERICAN SCREW PROPELLER CO. 1326-28 Chestnut St., Philadelphia, Pa.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. 50 E. 42nd Street, New York

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

BUSINESS NOTES

The Cleveland office of the Chicago Pneumatic Tool Company has been located in rooms 406-408, Engineers' building, Cleveland, since March 1. Ross Watson remains district manager.

The following officers were elected at the organization meeting of directors of the Air Reduction Company, Inc., New York, held on February 19: A. S. Blagden, president; A. R. Ludlow, vice-president; C. T. Adams, treasurer; M. W. Randall, secretary; C. L. Snow, assistant treasurer, and C. C. Emerson, assistant secretary.

H. Lad Landau, general sales manager of Rownson, Drew & Clydesdale, Inc., 68 William street, New York, left in early March for a trip to San Francisco and the Far East to establish business connections there.

J. O. NORRIE has become assistant manager of the Cunard office at Vancouver, B. C.

R. G. Ames has been made manager of the Chicago office of Black & Decker Manufacturing Company, 105 South Calvert street, Baltimore.

Since March 1 the Eastern branch of the Independent Pneumatic Tool Company has been located at 1463 Broadway, New York City.

Harry B. Hills has been placed in charge of the technical department of the Steward Davit & Equipment Corporation, 17 Battery Place, New York.

ACTIVITY OF THE SOUTH ATLANTIC MARITIME CORPORATION

Five Shipping Board Vessels Assured

The engineers, Monks & Johnson, Boston, Mass., who were commissioned by the South Atlantic Maritime Corporation to make a preliminary survey of the ports of Wilmington, N. C., Charleston, S. C., Jacksonville, Fla., and Savannah and Brunswick, Ga., have advised the construction of new terminals at these ports to be publicly owned. They propose that the terminals be located in positions accessible to the railroads entering the port, and be equipped with cargo cranes for loading and discharging ships. The engineers also advise the construction of warehouses adjacent to the piers, and the reservation of large tracts near the terminals for the development of industrial plants.

The corporation has already received promise of five ships from the Shipping Board for service between the ports mentioned and South America. Both outgoing and incoming cargoes are being booked by the representatives of the corporation for the first ship which will sail from Savannah on March 15.

To stimulate the development of the corporation, the company purposes to publish a magazine to be distributed through the South, Northwest and Middle West, and in the South American countries to which the vessels ply. By covering bankers, brokers, factories, manufacturers, importers and exporters in the circulation, the publication will help to build up extensive connections throughout the country. Inland offices have been established in the Munsey building, Washington, D. C., and in the Third National Bank building, St. Louis, Mo.

Canadian Shipbuilding Output

The following shipbuilding contracts are held by Canadian companies:

Number of Vessels	Size	Company
2	8,100	John L. Mullen Construction Company, Prince Rupert, B. C.
2	4,350	Port Arthur Shipbuilding Company.
2	2,800	Nova Scotia Steel Company, Nova Scotia.

Providence, R. I., Will Have Large Marine Railways

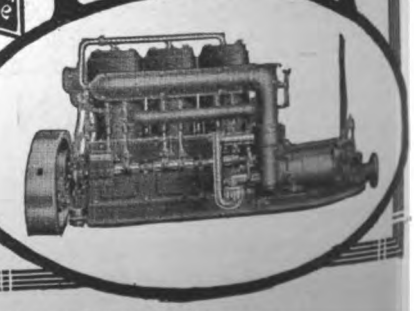
As previously noted, a marine railway of the Crandall type is to be built by the Marine Engineering & Dry Dock Company at Providence, R. I. The contract for the driving of piles, the first step in the work, has been let to the Aberthaw Construction Company, Boston, Mass.

The marine railway, which will be the largest of its kind in New England, will be able to handle vessels up to 3,500 tons. The railway will be equipped with a crane and a spur track on the site. The work is scheduled for completion about the end of May.

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

YOUR ILLUSTRATING, CATALOGS AND BOOKLETS
promptly completed in first-class manner by experienced advertising man who has specialized on mechanical subjects fifteen years. Complete service, including writing, designing and printing. No order too small.
Roland C. Wallower, 39 Cortlandt St., New York City

WE ARE SPECIALISTS IN
TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS
IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.
MAKERS OF IRVING'S SUBWAY (TRADE MARK) GRATING THE RETICULATED KIND

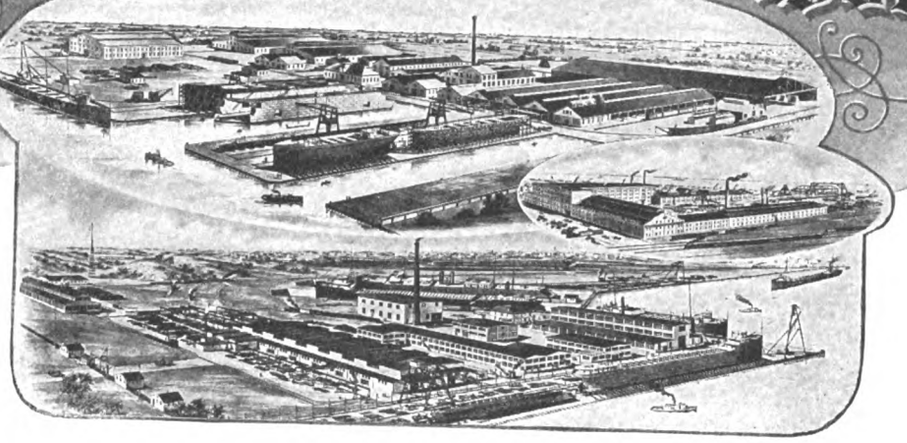
Real WOLVERINE Power
"The Motor With the Bore & Stroke"
Fuel Cost Reduced
from 70 to 80% without sacrificing reliability, flexibility or control. Perfect combustion on Kerosene or lowest grade of Coast Distillate.
Sizes from 5 to 200 H. P.
1 to 6 Cylinders
Kerosene
The gasoline question has been solved by the
WOLVERINE MOTOR WORKS
Bridgeport, Conn., U. S. A.


When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

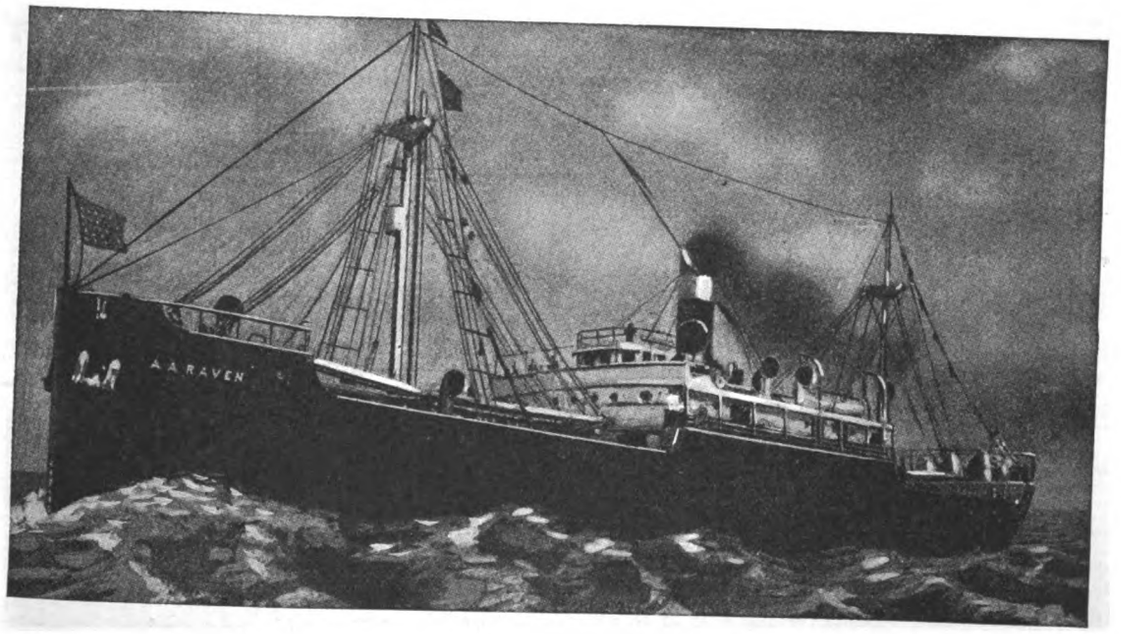
ANTONIO C. PESSANO, Chairman of Board
JOHN R. RUSSEL, President
H. W. HOYT, Vice President & Treasurer
J. A. UBSDELL, Vice Pres. & Gen'l Manager
F. G. MORLEY, Secretary

Great Lakes Engineering Works



Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

Generated on 2024-09-12 08:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

French Government Permits Importation of Machine Tools

Chairman Bernard M. Baruch, of the War Industries Board, has cabled that the French Government is willing to allow sales to French merchants of $40,000,000 worth of machine tools and agricultural instruments, provided commercial credits for one year can be arranged.

To stimulate effective development of American export trade abroad, the American Manufacturers' Export Association is establishing communication with American chambers of commerce in other countries.

Meeting of the National Merchant Marine Association

The permanent organization of the National Merchant Marine Association was completed at the meeting of the association held in Washington, March 17 and 18. Senator Ransdell was elected president.

The five vice-presidents of the organization are J. Parker Kirlin, New York; Edward B. Burling, Washington; William Butterworth, Moline, Ill.; John H. Kirby, Houston, Tex., and William R. Wheeler, San Francisco. The executive committee elected follows: Edward B. Burling, chairman; George W. Norris and Capt. C. A. McAllister, Washington, D. C.; L. L. Richards and Hendon Chubb, New York; William Allen, New Orleans, and Emile P. Albrecht, Philadelphia. The executive committee will elect a secretary and treasurer.

The list of the members of the Council follows:

Hon. Joseph E. Ransdell (president), United States Senator, Washington, D. C.

H. L. Aldrich, publisher, MARINE ENGINEERING, 6 East 39th street, New York City.

Emile P. Albrecht, president, Philadelphia Bourse, Philadelphia, Pa.

William Allen, commercial representative, city of New Orleans, 331 Maryland building, Washington, D. C.

Fred Arn, president, J. M. Card Lumber Company, Chattanooga, Tenn.

H. V. Bernard, importer, 505 Fifth avenue, New York City.

J. L. Bernard, shipbuilder, 115 Broadway, room 604, New York City.

Harry A. Black, Galveston, Tex.

William S. Brown, president, National Association of Marine Engineers, 356 Ellicott square, Buffalo, N. Y.

Edward B. Burling, lawyer, Evans building, Washington, D. C.

W. A. Bowen, editor and publisher, Arlington, Tex.

William Butterworth, president, Deer Plow Company, Moline, Ill.

Hendon Chubb, underwriter, 5 South William street, New York City.

E. T. Chamberlain, Commissioner of Navigation, Washington, D. C.

T. F. Cunningham, vice-president, Board of trade, New Orleans, La.

Robert Dollar, president, The Robert Dollar Company, San Francisco, Cal.

Oscar K. Davis, secretary, National Foreign Trade Council, Hanover square, New York.

George S. Dearborn, president, American-Hawaiian Steamship Company, 8 Bridge street, New York.

Holden A. Evans, president, Baltimore Dry Docks & Shipbuilding Company, Baltimore.

John H. Fahey, president, St. John's River Ship Yard Company, 40 Court street, Boston.

P. A. S. Franklin, president, International Mercantile Marine Company, 9 Broadway, New York City.

Frank P. Glass, Birmingham, Ala.

C. E. Gunsky, civil engineer, San Francisco, Cal.

H. C. Hunter, secretary, Atlantic Coast Shipbuilders' Association, 30 Church street, New York City.

W. R. Ingalls, consulting mining engineer, Hill Building, New York City.

P. O. Knight, lawyer and shipbuilder, Knight, Thompson & Turner, Tampa, Fla.

J. Parker Kirlin, lawyer, 27 William street, New York City.

John H. Kirby, president, National Lumber Manufacturers' Association, Chicago, Ill.

Chas. S. Keith, president, Central Coal & Coke Company, Kansas City, Mo.

Alexander Legge, general manager, International Harvester Company, Chicago, Ill.

Edgar L. Luckenbach, steamship owner and operator, 44 Whitehall street, New York City.

Sumner Myrick, lawyer in charge Marine Transportation Bureau, Chamber of Commerce of the United States, Washington, D. C.

Captain C. A. McAllister, United States Coast Guard, Washington, D. C.

H. H. Merrick, Armour Company, Chicago, Ill.

T. F. Newman, Cleveland & Detroit Steamship Company, Cleveland, Ohio.

George W. Norris, commissioner, Federal Farm Loan Bureau, Washington, D. C.

J. K. Orr, Atlanta, Ga.

John H. Pruett, president, Masters, Mates & Pilots Association, 116 Broad street, room 61, New York City.

Commander W. V. N. Powelson, Overseas Transport Service, 61 Broadway, New York City.

H. H. Raymond, president Clyde Steamship Company and Mallory Steamship Company, New York City.

J. C. Rohlf, oil producer and exporter, San Francisco, Cal.

L. L. Richards, steamship broker; Director of Bureau of Transportation, War Trade Board, Washington, D. C.

F. L. Sanford, Southern Pine Association, Zona, La.

M. J. Sanders, steamship agent; Federal manager, Mississippi-Warrior Waterways, 1212 Hibernia building, New Orleans, La.

Ernest T. Trigg, president, Chamber of Commerce, Philadelphia, Pa.

Lieutenant-Commander Stevenson Taylor, president, American Bureau of Shipping, 66 Beaver street, New York City.

Eugene P. Thomas, president, United States Steel Products Corporation, 30 Church street, New York City.

Mathew Woll, American Federation of Labor, Washington, D. C.

Paul Wooton, Union Trust building, Washington, D. C.

H. A. Wheeler, banker; president, Chamber of Commerce of the United States, 7 South Dearborn street, Chicago, Ill.

REG'D TRADE MARK
INTERNATIONAL
COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS
In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually
Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING
INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N. Y.

STRATFORD OAKUM
QUALITY GUARANTEED JERSEY CITY and EVERYWHERE
GEO. STRATFORD OAKUM CO. - - - - - 165 CORNELISON AVE., JERSEY CITY, U. S. A.

MARINE STEAM ENGINES
FOR
TRAWLERS, TUGS, FREIGHTERS
AND PASSENGER BOATS
MARINE IRON WORKS
"THE ORIGINAL"
2036 DOMINICK ST. CHICAGO

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

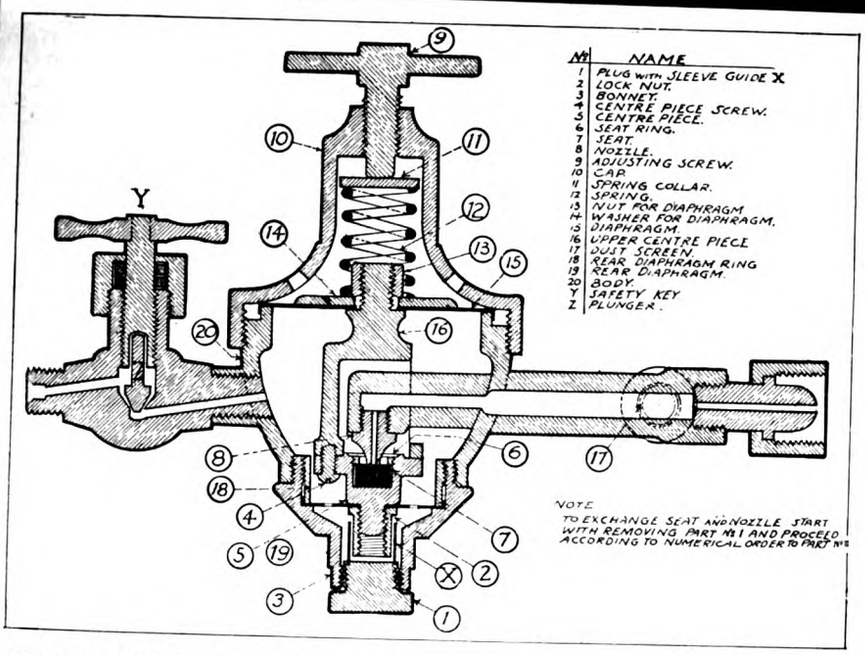
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

GENERAL WELDING & EQUIPMENT.CO.

G.W.&E.CO.

107 MASS.AVE. BOSTON,MASS.

IN USE AT
BETHLEHEM SHIPBUILDING CORP. FORE RIVER, SQUANTUM, PROVIDENCE.
TEXAS STEAMSHIP CO.
CANADIAN VICKERS CO.
WATERTOWN ARSENAL
LORD CONSTRUCTION CO.
GENERAL ELECTRIC CO.
CANADIAN PACIFIC R. R.

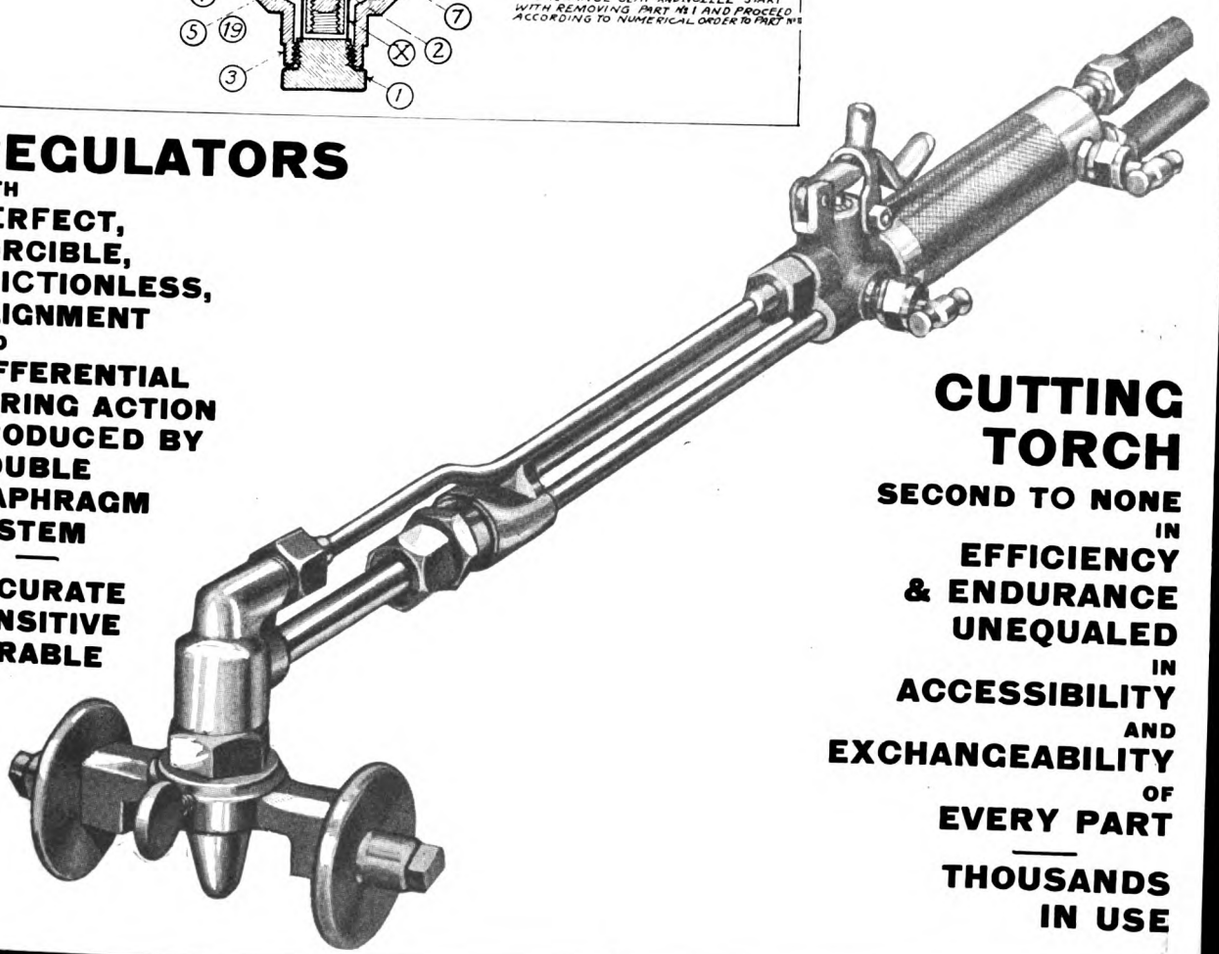


No	NAME
1	PLUG WITH SLEEVE GUIDE X
2	LOCK NUT.
3	BONNET.
4	CENTRE PIECE SCREW.
5	CENTRE PIECE.
6	SEAT RING.
7	SEAT.
8	NOZZLE.
9	ADJUSTING SCREW.
10	CAP.
11	SPRING COLLAR.
12	SPRING.
13	NUT FOR DIAPHRAGM.
14	WASHER FOR DIAPHRAGM.
15	DIAPHRAGM.
16	UPPER CENTRE PIECE.
17	DUST SCREEN.
18	REAR DIAPHRAGM RING
19	REAR DIAPHRAGM.
20	BODY.
T	SAFETY KEY
Z	PLUNGER.

THE TWO
FUNDAMENTALS
OF A PERFECT
CUTTING
EQUIPMENT

REGULATORS
WITH
PERFECT,
FORCIBLE,
FRICTIONLESS,
ALIGNMENT
AND
DIFFERENTIAL
SPRING ACTION
PRODUCED BY
DOUBLE
DIAPHRAGM
SYSTEM

ACCURATE
SENSITIVE
DURABLE



CUTTING
TORCH
SECOND TO NONE
IN
EFFICIENCY
& ENDURANCE
UNEQUALED
IN
ACCESSIBILITY
AND
EXCHANGEABILITY
OF
EVERY PART

THOUSANDS
IN USE

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

A General Catalogue and price list is issued by the Kennedy Valve Manufacturing Company, Elmira, N. Y. In compiling the catalogue the company has endeavored to present all essential features in a simple and at the same time comprehensive manner. 122 pages; illustrated.

Marine Oakum is the subject of a bulletin published by the George Stratford Oakum Company, 160 Cornelison avenue, Jersey City, N. J. "More Stratford Special No. 1 marine oakum has been used by the U. S. Shipping Board Emergency Fleet Corporation of the Government than all other makes of oakum combined, and not a single bale has been condemned or rejected. This oakum receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. Manufactured only by George Stratford Oakum Company, 160 Cornelison avenue, Jersey City, N. J.

Staybolt Taps are described in a catalogue published by the Pratt & Whitney Company, 111 Broadway, New York. "Like all P & W Small Tools, Pratt & Whitney staybolt taps are liked for their nice working qualities and their exceptionally long life of service. They're not only good when new but are heat treated and seasoned to maintain this goodness. Because they cut threads accurately and cleanly with the least expenditure of time and effort these taps are favorites in the shop. If you've used them before you know just how good they are. If you haven't, send us your first order—we know you'll be back for more. They're carried in stock in our sales rooms in all large cities, as listed here."

The Electric Tachometer, as installed in the United States Navy transports, is the subject of a bulletin published by the Electric Tachometer Corporation, 435 North Broad street, Philadelphia, Pa. "Install Tetco electric tachometers and have your engine speed right before you—always and anywhere—in engine rooms, chart house or on the bridge. No up-to-date vessels should be without them. Tetco Tachometers show direction of rotation and revolutions per minute instantaneously and accurately within 1 percent. They are easily installed; take up little room and require practically no maintenance. The photo shows one of fifty installations made for U. S. Navy transports. For our estimate sends us data regarding shaft diameter, maximum revolutions per minute and number and location of indicators."

The Benson Electric Telemotor is described in a catalogue published by the American Engineering Company, Philadelphia, Pa. "Electric control is the ideal form of transmission. It insures more sensitive control and greater ease of operation than any other. It relieves you of worry about air traps or temperature conditions. It eliminates the necessity of keeping a long line of shafting and gears in perfect alignment. Stretching will not in any way lessen its effectiveness, so that point need not worry you. It is so simple that it is almost impossible to get it out of order. It is very inexpensive in operation, because it uses a very small amount of current. Ask us to tell you more about the Benson Electric Telemotor."

"Repair of the German Ships" is the title of a booklet published by the Wilson Welder & Metal Company, Inc., 10 Rector street, New York, a copy of which will be sent to any of our readers upon request. This booklet tells how the Wilson Plastic Arc Welder made possible the repair of the seventy cast iron cylinders and other parts of the interned German ships—"the biggest welding repair job in the history of the world." "The use of a Wilson Plastic Arc Welder makes riveting of condensers and tanks unnecessary, and many shipbuilding and industrial plants have been quick to take advantage of this economy. It is an economy, because welding can be done at approximately half the cost of riveting, and while riveted seams let go and become leaky, necessitating welding as a second operation, Wilson welded seams hold, and hold tight, making a second operation unnecessary. The Wilson Plastic-Arc Welder will lastingly weld any metal of any bulk as successfully as it will steel or iron plate. The great success of the Wilson Welded in making lasting welds on the 9-foot cast iron cylinders of the German ships, and also in numberless other cases, is due to the fact that the critical heat at which the metal should be fused is kept constant at the arc. This predetermined, critical and constant heat eliminates the possibility of burnt metal or voids, resulting in failure, common of welds when the critical heat cannot be controlled."

Boiler Tube Caps Kept in Prime Condition

The way to do it is to smear them with Dixon's Graphite Pipe Joint Compound before replacing. This compound never "sets" or hardens like cement. The caps can be removed and replaced whenever desired, without the slightest trouble. It will never be necessary to regrind them to get a steam-tight fit with the seats.

Dixon's Graphite Pipe Joint Compound is equally valuable for all threaded or flanged joints, for bolts and nuts of all kinds, metal gaskets, etc.

It makes the tightest joints, prevents rust and corrosion and does not get hard or brittle.

For more complete information write for Booklet No. 75-D.

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY

ESTABLISHED 1827

A Man Covering The Pacific Coast

Calling upon Shipbuilders, Supply Houses, etc., wishes to secure the Agency for Two or Three well-known Marine Specialties.

Address F. C. BREWER, 909 Eighth Avenue, Seattle Washington

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"MANGANESE BRONZE"

the logical metal for

PROPELLERS

INCREASED EFFICIENCY

NON CORROSIVE—LONG LIVED

Steamship MUNDELTA.—Built by Newport News Shipbuilding Company for the Munson Line. Equipped with 17 ft. diameter, 4 blade Spare's Manganese Bronze Propeller, weighing 18,000 lbs.

WE HAVE MADE PROPELLERS FOR THE FOLLOWING:

American International Shipbuilding Corp.
Baltimore Dry Dock & Shipbuilding Company
Bethlehem Shipbuilding Corporation
Canadian Vickers, Ltd.
Federal Shipbuilding Company
Manitowoc Shipbuilding & Dry Dock Company
Newport News Shipbuilding & Dry Dock Co.
New York Shipbuilding Corporation
Norfolk and Washington Steamship Company
Pocahontas Fuel Company
Pusey and Jones Company
Red "D" Line of Steamships
Standard Shipbuilding Corporation
Standard Motor Construction Company

Be Convinced, Write for Pamphlet

AMERICAN MANGANESE BRONZE CO.

Holmesburg, Philadelphia, Pa.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Graton & Knight Manufacturing Company, Worcester, Mass., oak leather tanners and belt makers, has got out a finely illustrated catalogue in two colors, showing the different processes of belt making from the receiving of the hide right through to the finished belt. This catalogue consists of 124 pages and cover, besides a special three-page insert of the factory. It not only illustrates and describes the different products made by Graton & Knight, but shows what can be accomplished with unsurpassed facilities for the manufacture of high-grade leather belting and leather specialties. The belting section fully explains the characteristic qualities, the particular differences and the capabilities of their different brands of belting. It also embodies mechanical rules, tables and other information which should be of value in determining the most efficient belt for any drive or in assisting with other transmission problems. The Graton & Knight Manufacturing Company is the manufacturer of the Standardized Series Leather Belts which have been advertised extensively in the national and trade fields. Besides the belting the company also make cup packings, pump leathers, automobile leathers, blanket straps, trunk and suitcase straps, trunk handles, halters and other leather products, such as insoles, outsoles, counters, box toes and Goodyear welting for the manufacture of shoes. The Graton & Knight Manufacturing Company will furnish anyone interested with a copy of this catalogue.

Loud-Speaking Marine Telephones are described in a circular issued by Klaxon Company, Department C-5, Industrial Division, 33 West Forty-second street, New York. "For peace-time price competition install loud-speaking marine telephones. Install them on your ships between the bridge and the engine room, between the bridge and the crow's nest and between the forward and after bridge. Klaxon-Stentor loud-speaking marine telephones are quicker, safer and more dependable than voice tubes. Let our engineers submit estimates on your contemplated voice tube installations. Loud-speaking telephone equipments might save you money."

"Airco" Generators are described in a catalogue published by the Air Reduction Company, Inc., 120 Broadway, New York. "Airco generators can be operated in only one way—the right way. Airco generators are on the approved list of the National Board of Fire Underwriters. Airco generators are of the carbide to water type, and use 1¼- by ⅜-inch carbide, assuring a maximum gas yield and low, even generation without pressure fluctuation. Because of the Airco type of feed, the carbide is evenly distributed over the surface of the water, and insuring cool gas of a high quality, which can be obtained only under these ideal conditions. The generation without pressure fluctuation. Because of the Airco type which is operated by the gas passing through it to the service pipe. There are no clock work, springs or weights to get out of order."

Riveting and Chipping Hammers.—Bulletin 101 has just been issued by the Duntley-Dayton Company, Westminster building, Chicago, being the first of a series of publications which this company has in preparation. It is devoted to the Duntley-Dayton line of riveting and Chipping hammers, of which there are twenty sizes and styles, and features their low cost of maintenance. Pneumatic holders-on, pneumatic rammers, rivet sets, chisel blanks, hose, hose couplings, grease and oil, and lead hammers for use in repairing pneumatic tools, are also presented. A view of the new plant of the Dayton Pneumatic Tool Company at Dayton, Ohio, whose entire output is handled by the Duntley-Dayton Company, appears on the front cover.

"Efficiency in Flanging" is the subject of a bulletin published by the McCabe Manufacturing Company, Lawrence, Mass. "Get away from the old-time and unreliable method of hand nanging by installing a McCabe pneumatic flanging machine. The McCabe will flange sheets cold ½ inch or under in thickness. This feature saves lost time waiting for heats—insures maximum production per man unit. With only two men, this sturdy and powerful machine will flange six complete locomotive flue sheets in one day—and they are flanged mechanically correct, too. With a 'McCabe' in your shop you need have no thought of important work being held up on account of workmen laying off The 'McCabe' is always on the job. May we describe some comparative jobs?"

We Sell all Books on Marine Engineering

Not Out of Print

MARINE ENGINEERING

6 EAST 39th STREET, NEW YORK

UNION DRY DOCK & REPAIR CO.

Vessel Repairs in Wood and Iron

WEEHAWKEN, N. J.

Dry Docks and Shipyard Adjoining West Shore Ferry

TELEPHONE, 904-905 UNION

INSIST ON HAVING

JEFFERY'S MARINE GLUE

In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.

Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"

L. W. FERDINAND & CO.

152 Kneeland St. Boston, Mass., U. S. A.

The Invincible Nozzle

Fire Department Supplies

ANDREW J. MORSE & SON

INCORPORATED

221 HIGH ST., BOSTON, MASS.

DIVING APPARATUS

Cumberland Shipbuilding Co.

SHIPBUILDING AND REPAIR PLANT

SOUTH PORTLAND, MAINE

Telephone 6936

Builders and repairers of all types of wooden vessels.

New Marine Railway of 2,500 tons capacity. Inquiries solicited for estimates, costs and dates. Most modern shipbuilding plant on the Atlantic Coast, with every facility for expeditious work. Most accessible harbor on the Coast.

For Sale

Six No. 12 Sweetland Filter Presses complete with filtering leaves; leaves spaced approximately 3″ centers. Each press equipped with a 9″ Hydraulic Cylinder to facilitate opening and closing lower body.

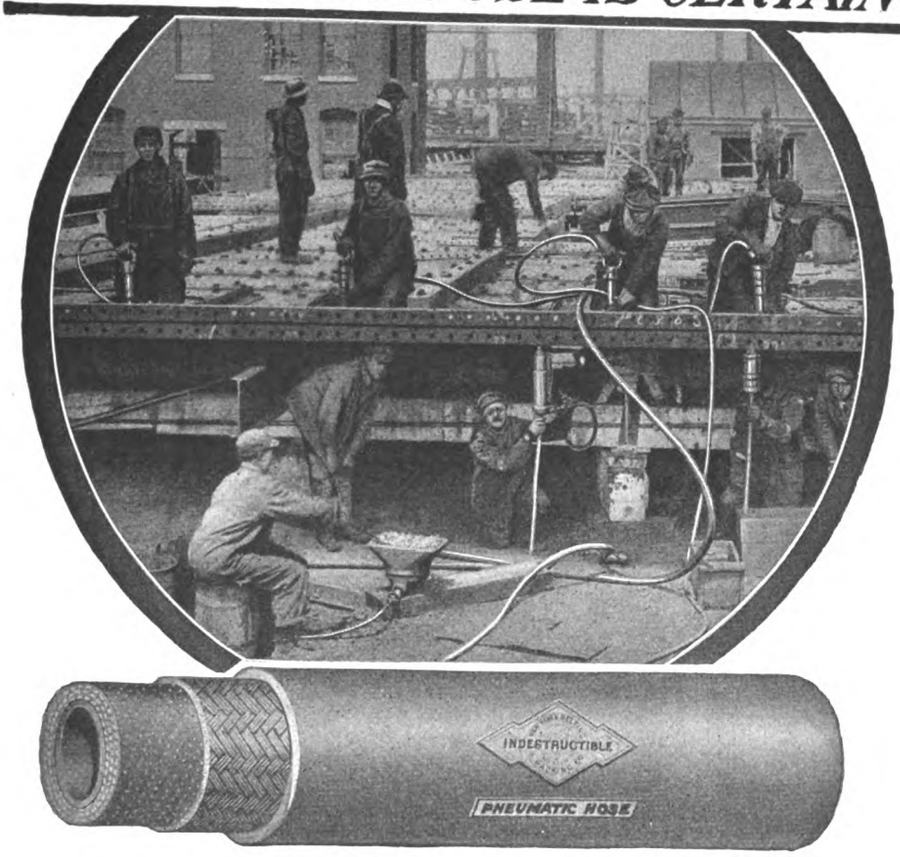
Apply to

KEASBEY & MATTISON CO.

Ambler, Pa.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

WHERE ROUGH USE IS CERTAIN



When you buy pneumatic tool hose you pay least in the long run, if you buy long-lived hose. Otherwise any one of a dozen faults, common to cheaper grades, can delay a contract or hold up delivery. And that costs money.

Where rough use is certain, you'll do well to consider

"INDESTRUCTIBLE" PNEUMATIC TOOL HOSE

For there are a number of special features that make it best in its field.

First, there's an oil-proof, seamless inner tube that never works away from its wall of protecting duck. And that duck is three-ply rubber filled. Then there's a braided fabric jacket—continuously woven. It adds great strength. Lastly there's a thick rubber cover that's built to take punishment. It won't kink—you can't make it. And that's a huge time-saver itself.

It is one of many products built by pioneers in the mechanical rubber goods field which, by the manner of its making, cannot fail.

New York Belting and Packing Company

MECHANICAL RUBBER GOODS

Makers of "TEST SPECIAL" Rubber Belting

New York Boston Chicago Philadelphia San Francisco Pittsburgh St. Louis

NEW YORK BELTING & PACKING CO. FOUNDED 1846 INCORPORATED 1856

Generated on 2024-09-12 08:29 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Marine Forgings of all kinds are the subject of bulletins published by the Mesta Machine Company, Pittsburgh, Pa. "Every ingot used in the production of Mesta marine forgings is poured from steel made in the Mesta open-hearth steel furnaces. The forging department is equipped with Mesta steam hydraulic presses of large capacity, which assures a thorough working of the steel throughout its entire mass. The department for the finishing of shafts has a larger capacity and is equipped with more modern machinery than that of any other producer of forgings."

The Double-Helical speed reducing gear, as used for stepping down from the high speeds of steam turbines to speeds suitable for ships' propellers, direct-current generators, large centrifugal pumps and fans, rope and belt drives, etc., was first introduced about twenty-five years ago by the late Dr. De Laval. This type of speed-reducing gear has subsequently been developed and refined by the several companies bearing his name, particularly for large size units, by the De Laval Steam Turbine Company, Trenton, N. J. That company has now issued a 32-page catalogue describing standardized geared turbine units for marine service. The gain in fuel economy of the steam turbine over the reciprocating engine is stated to be approximately 25 percent. The geared turbine weighs about half as much and occupies less than a third of the cubical space required by the engine. It is also more accessible and easier to repair, the expense for supplies and attendance is considerably less. The new publication describes the details of construction of turbines and gears and also various turbine-driven auxiliaries, including lighting sets, circulating pumps, boiler feeders, etc. A new development is the centrifugal pump for the continuous purification of the oil used in the turbine and gear bearings and on the gear teeth.

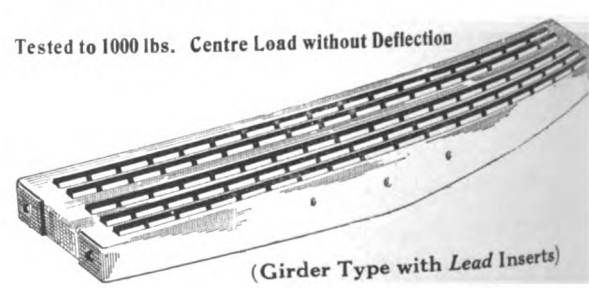
"Boyer" Pneumatic Hammers are the subject of Bulletin No. 124, published by the Chicago Pneumatic Tool Company, 1044 Fisher building, Chicago, Ill. "The first successful pneumatic hammer placed on the market was the 'Boyer,' and the place it made for itself in the beginning has been held to this day. Sound principles in design, operating advantages that prove out in performance, and the service policy of its makers —all these contribute to the permanence of 'Boyer' prestige. The 'Boyer' is the hammer for your plant. Ask the men who are to use them. The 'Boyer' line of riveting hammers and rivet busters, in conjunction with the 'BK' line of chipping and calking hammers, presents an assortment from which any pneumatic hammer requirements may be accurately and properly filled. All parts of any particular tool are made absolutely interchangeable by the use of accurate jigs and templates."

Boiler Logic.—The Heine Safety Boiler Company, St Louis, Mo., has just completed the latest edition of "Boiler Logic," an 86-page treatise on steam boilers. This treatise covers the following topics:

1. Some Fundamental Considerations of Boiler Design—
   - (a) Furnace Design Requirements Mixing, Time, Temperature.
   - (b) Heat Transmission from Fire by Radiation.
   - (c) Heat Transmission by Convection.
   - (d) Heat Transmission Through Tubes and to Water.
2. Practical Baffling of Watertube Boilers—
   - (a) Flexibility of design.
   - (b) Leakage and cost of repairs and renewals.
   - (c) Active and inactive surface.
   - (d) Ease of cleaning soot and ash deposits.
3. Heine Boilers for Different Fuels Firing and Services—
   - Hand Firing with Bituminous Coal.
   - Hand Firing with Anthracite Coal.
   - Chain Grate Stokers.
   - Underfeed Stokers.
   - Oil Fired.
   - Shavings and Refuse.
   - Bagasse.
   - Gas Fired.
   - Waste Heat Boilers.
   - Dredge Boat Boilers.
4. Overloads.
5. The Boiler as a Pressure Vessel.
6. Details of Construction, Heine Boilers.

UNIVERSAL SAFETY LADDER TREAD

Tested to 1000 lbs. Centre Load without Deflection



(Girder Type with *Lead* Inserts)

FOR SHIPS

Suitable for Naval and other Vessels, and Industrial purposes.

LIGHT, DURABLE, RUSTPROOF

Universal Safety Tread Company
40 Court Street **Boston, Mass.**

SEND FOR CATALOGUE F.

BRANCHES:

PHILADELPHIA, PA. 417 Widener Building
SEATTLE, WASH. 332 Pioneer Building
CHICAGO, ILL. 618 West Jackson Boulevard
NEW YORK, N. Y. 120 Liberty Street
SAN FRANCISCO, CAL. 76 Sacramento Street
DETROIT, MICH. 913 Dime Bank Building

Generated on 2024-09-12 08:13 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

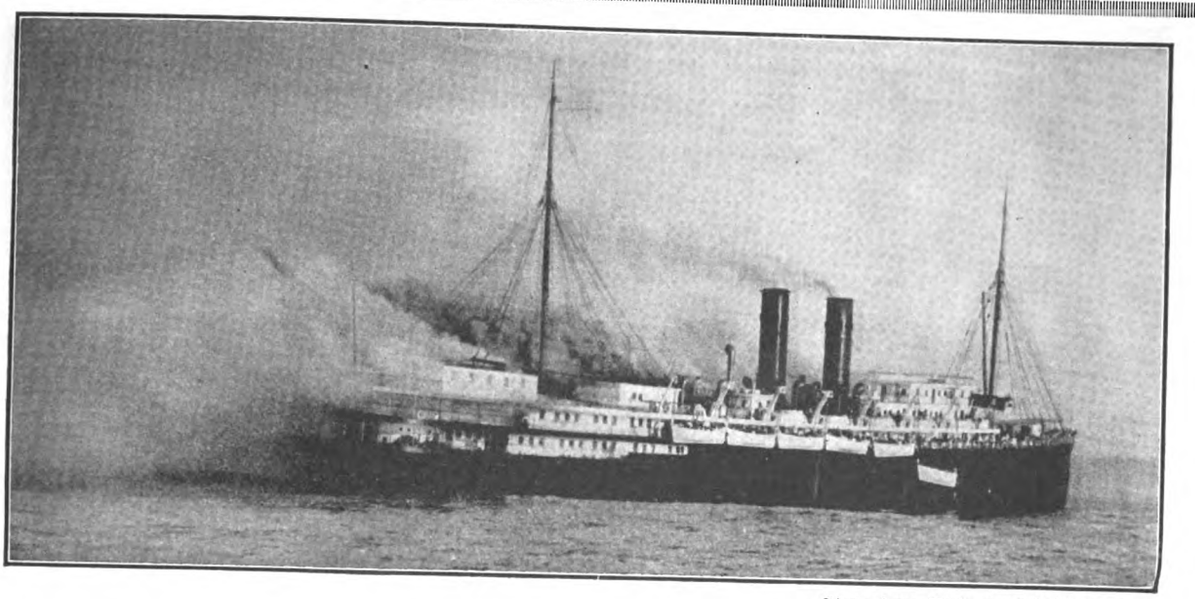


Photo from Underwood & Underwood

For our Merchant Fleet—
A new type of Automatic Fire Protection

A FIRE at sea is doubly serious because of the difficulty of reaching it in its early stages. Many ships are lost because the fire is not discovered until too late for the ordinary fire-fighting appliances to be of any real service.

In buildings, Automatic Sprinkler protection, always on duty, and instantly operating at the *source* of the fire, has saved billions of dollars of property from destruction and is everywhere recognized as reducing the risk of serious fires from 50% to 95%.

But because of certain vital objections on the part of marine architects and shipowners, this form of protection has not been largely adopted for marine risks.

A new type of Grinnell Automatic Sprinkler system overcomes all of these objections. Under normal conditions the pipes are empty. There is no possibility of accidental or premature operation. Damage to the piping during loading or unloading, involves simply a few trifling repairs, but no water is discharged.

Unless there is an actual outbreak of fire, this Grinnell system *will not operate*, but immediately a fire *does* happen, in no matter how remote a corner of the hold, forepeak, lazarette or other part of the ship, it is instantly extinguished by a powerful deluge of water, directed right at the heart of the blaze, *automatically set in operation by the heat of the fire itself.*

This new type of fire protection is now at the service of the shipowner. It can be applied to new or old ships, whether cargo tramps or costly passenger liners. Our special Bulletin giving details of this system will be sent on application.

Our Marine Department will gladly submit plans, estimates and proposals without cost or obligation.

Address Marine Department, General Fire Extinguisher Co., Providence, R. I.

GRINNELL
AUTOMATIC SPRINKLER SYSTEM
The Factory-Assembled System

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The "Fire-Gun" for Marine Use is the subject of a bulletin issued by the Fire-Gun Manufacturing Company, 115 Fourth avenue, New York. "The Fire-Gun puts out little fires before they get to be big ones. Fire-Gun is a new liquid pump which is positively double-acting from the first stroke until it is absolutely empty. Never pumps air; never sputters or drips, but shoots a solid stream 30 to 40 feet; will stand roughest usage; never leaks nor fails to operate. Fire-Gun holds 25 percent more fluid than other hand extinguishers, and this extra fluid often saves the day. Fire-Gun Fluid is effective where water is useless; it will not deteriorate; it is a non-conductor of electricity; does not freeze at 50 degrees below zero, and will not damage machinery or delicate fabrics."

"Little David" Pnuematic Tools are described in the "Little David" catalogue published by the Ingersoll-Rand Company, 11 Broadway, New York. "If you will watch a 'Little David' tool at work you will see that it is more speedy than others—enough so to justify its use on that ground alone. But if you measure the air consumed, you will find a power saving per unit of work—and continued service will show a marked decrease in the item of lost time due to breakage and expense of spare parts. Superior design and methods of construction make 'Little Davids' the most economical air tools. The 'Little David' catalogue tells all about them. Ask for a copy."

The Ryerson High-Speed Friction Saw and other machinery for the shipbuilder is described in Bulletin F, published by Joseph T. Ryerson & Son, Chicago, Ill. "The Ryerson High-Speed Friction Saw cuts all steel shapes used in the construction of ships in the quickest possible time. Many shipbuilders in all parts of the world to-day are using this saw with complete success. Write for complete information and Bulletin F, also complete literature on machinery for the shipbuilder."

"Something New in Hollow Staybolt Iron" is described by Joseph T. Ryerson & Son, Sixteenth and Rockwell streets, Chicago, Ill., in a bulletin just published. This iron, "Ulster Special," is described as follows: "Seamless—the only hollow iron without sections, longitudinally welded to secure the hollow feature. Every bolt length guaranteed not to split in heading, threading or driving, increases boiler shop output, reduces shop cost. All made from solid finished bar of identical 'Ulster Special,' that is standard for staybolts on majority of leading railroads. Manufactured from finished bar without further heating or working; a tough, ductile and uniformly dependable iron insured. Locomotive time lost in the shop is costly—one protection is seamless hollow staybolt iron. Exact staybolt lengths furnished—saves cost of cutting, eliminates waste, facilitates handling. Sizes in stock for your rush requirements without extra charge; manufacturing facilities insure prompt shipment. Specify seamless hollow iron—insist on 'Ulster Special'—there is no other hollow iron that is seamless."

The "Fulflo" Duplex Circulating Pump is described in a catalogue published by the Fulflo Pump Company, Blanchester, Ohio. "Made in any desired capacity. Methods of holding devised to suit the installation conditions of the engine to which they are to be applied. We also manufacture Flocontrol bilge pumps and centrifugal pumps for water circulation and for bilge pump purposes. All of these pumps absolutely retain their prime without aid of valve, and may be placed above the level of the liquid where desired."

"Urite High Speed Steel" is the title of a booklet published by the Hercules Electric Steel Corporation, 137 Lafayette street, New York. "Urite High Speed Steel is a comparatively new product of the electric furnace, and contains besides tungsten, Vanadium, chromium, manganese, silicon and carbon, the important element uranium. In order to comply with the wishes of many of our friends we have published this catalogue, which gives a detailed description of the properties, manufacture, treatment and uses of Uranium High-Speed Steel. * * * Uranium is best introduced into the steel through the medium of an electric furnace. By means of this process the analysis of the steel is under absolute control. The well-known cleansing properties of the electric furnace, together with those of metal Uranium, give as pure a steel as it is possible to obtain. With a pure steel obtained by the electric method and because of its Uranium content we can with assurance say that Urite High-Speed Steel is second to none in the market at the present time. In many cases it will last twice as long as any other steel."

THE FIRE-GUN

APPROVED BY UNITED STATES STEAMBOAT INSPECTION SERVICE AND BY UNDERWRITERS LABORATORIES

puts out little fires before they get to be big ones.

FIRE GUN is a new liquid pump which is positively **double acting** from the first stroke until it is absolutely empty. NEVER pumps air. NEVER sputters or drips, but shoots a solid stream thirty to forty feet. Will stand roughest usage. NEVER leaks nor fails to operate.

FIRE GUN holds 25% more fluid than other hand extinguishers, and this extra fluid often saves the day.

FIRE GUN fluid is effective where water is useless. It will not deteriorate. It is a non-conductor of electricity. Does not freeze at fifty degrees below zero, and will not damage machinery, or delicate fabrics.

FIRE GUN MANUFACTURING CO.,

INCORPORATED

115-19 FOURTH AVENUE NEW YORK CITY.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Aldrich Marine Directory

1919 EDITION

Our 1918 MARINE DIRECTORY OF SHIPBUILDERS AND VESSEL OWNERS in the United States met such a long-felt want that we are publishing a new and enlarged edition which will be fully up to date.

Under Shipbuilders is a list of all builders, both of steel, wood, and concrete vessels, names of leading officials and necessary information regarding the size, capacity, etc., of each yard.

Under Vessel Owners are included names of leading officials, terminal points, dock superintendents, lists of vessels, etc.

Fully Indexed

Price $5 Postpaid.

MARINE ENGINEERING

6 EAST 39th STREET NEW YORK

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

For Sale—Dismanted Wooden Tugboat; hull, 110 feet long 22 feet beam, 11.6 feet depth. Apply *Purchasing Agent*, L. I. R. R., Pennsylvania Station, New York.

For Sale—One Wheeler Admiralty type Surface Condenser, 1,680 square feet cooling surface, and complete with 12 x 14 x 14 x 14 combined air and circulating pump. Condenser is in good operating condition and being displaced by larger unit. For further particulars address *Texas Star Flour Mills*, Galveston, Tex.

Shipbuilder—Open for suitable responsible position; last employed as Superintendent of hull construction; capable man in drafting office. Over 20 years' varied experience, principally on small and light draft river work. Address *Box* 779, care of MARINE ENGINEERING.

Marine Engineer and Draftsman, technical graduate with over eleven years' experience in shipbuilding, of which seven years with American yards, desires responsible position here or abroad. Speak Italian and Spanish. Address *Box* 7, care of MARINE ENGINEERING.

Superintendent, with broad, practical shipyard experience, covering yard, shops, outfitting, drawing office and administrative departments, seeks position of responsibility where a good executive and organizer who is energetic and capable is needed. Address *Box* 42, care of MARINE ENGINEERING.

Position Wanted as Chief Engineer of shipyard or plant building marine engines or marine equipment. Now holding position of responsibility with large shipyard. Am thoroughly capable, energetic and a good executive. Have eighteen years' practical shipyard experience. Address *Box* 98, care of MARINE ENGINEERING.

Position Wanted—Assistant to general superintendent of steel shipyard, thoroughly familiar with ship construction and repair work, executive ability, technical training, practical experience in mold lift, ship fitting, erecting and fitting out. Address *Box* 725, care of MARINE ENGINEERING.

Wanted—Position as Purchasing Agent; sixteen years' experience—eight years railroad, eight years shipbuilding. New construction and reconstruction work. First-class references. Address *Purchasing Agent*, care of MARINE ENGINEERING.

General Superintendent or General Manager available, capable of taking charge of an up-to-date shipbuilding company; covering new construction and repairs. Fourteen years' experience in yards of Atlantic coast and Great Lakes; capable of furnishing complete organization; thirty-five years of age and married; references. Personal interview desired. Address *General Superintendent*, care of MARINE ENGINEERING.

Ship Repairer, Builder, Naval Architect, Marine Engineer and Estimator, twenty years' experience in steel shipbuilding in all its branches, desires responsible position with established shipbuilding or repairing plant. Up-to-date methods, coupled with economy for quick handling of large repair and conversion jobs. Experience in naval as well as all kinds of mercantile craft. Age 36; would go anywhere. Address *Box* 998, care of MARINE ENGINEERING.

Mechanical Engineer, with twelve years' experience on marine work, desires change. Employed with Shipping Board since war started, but wishes to return to commercial work. Particularly experienced in the design of reciprocating, steam and Diesel engines and auxiliaries. Graduate of leading university, in both mechanical and electrical engineering. Address *Commercial Work*, care of MARINE ENGINEERING.

Marine Refrigeration — All-around Engineer, Practical and Technical, with many years' experience, marine (and land), with leading British firms, CO_2 and NH_3 systems, and all classes of cargo and provision carrying, who have ORIGINATED CO_2 refrigeration with British firm, desires post with American engineers to commence refrigeration in new shipbuilding. Can carry job through, *i. e.*, estimation, design (on blank sheet, not copy), manufacture, erection, running, etc. Address *Marine Refrigeration*, care of INTERNATIONAL MARINE ENGINEERING, 8 Bouverie street, London, E. C. 4.

We Want Three Live Salesmen—One for each of the following divisions of our business: One man to represent us in the shipbuilding and ship chandlery trade; another to look after the export trade in New York City, and one calling on the heavy hardware jobbers. These three men must have the confidence of the principal buyers in their respective line and experience to guide them in locating customers who are in the market for our product. We will assist them by carrying full-page advertisements in three of the most far-reaching trade journals in the country, together with a direct mail appeal. If you are connected with a reputable house we want you to represent us on a commission basis, selling our product as a side line. Address *Tackle Block Manufacturer*, care of MARINE ENGINEERING.

Link Belt Silent Chain Drive is described and illustrated in a catalogue published by the Link Belt Company, Philadelphia, Pa. "Ten years ago the U. S. Rubber Reclaiming Company, of Buffalo, installed a 50-horsepower Link-Belt Silent Chain Drive. That drive has been operating ever since, 24 hours a day, carrying a 50 percent overload. If figured on the basis of a 10-hour day that drive has been in operation twenty-four years. Think of it! Twenty-four years of driving efficiency—unaffected by heat, cold or dampness, carrying 50 percent greater load than was intended—with never a slip, the load always cushioned and never a moment's idleness for chain repairs. That's Link-Belt Silent Chain Drive efficiency and service. It will prove itself 'flexible as a belt, positive as a gear, more efficient than either,' in your plant. Let us prove it."

"The Reilly Multi-Screen Feed Water Filter and Grease Extractor" is the title of Bulletin 609, just published by the Griscom-Russell Company, 2124 West Street building, New York. "Condensed steam from engine cylinders, heating systems, etc., is an ideal distilled water for boiler feed and many manufacturing purposes, provided it is freed from oil, grease and other foreign matter in suspension. If this oil, or material in suspension, is allowed to enter the boiler, it forms a coating on the heating surfaces, necessitating the burning of additional coal, and often resulting in severe damage. The Reilly Multi-Screen Feed Water Filter and Grease Extractor efficiently removes this oil from the water. It is also suitable for the removal of mud or sand from lake or river water when used for boiler feed."

The Ford "Tribloc" is described and illustrated in Catalogue 3, just published by the Ford Chain Block & Manufacturing Company, Second and Diamond streets, Philadelphia, Pa. "Dependable for heavy lifting. The Ford Tribloc, with its steel vitals, its positive, powerful, holding mechanism, is something more than a mere lifting tool; it is a hoist that may be depended upon greatly to exceed its rated capacity. All these are attributes of every Ford Tribloc, and they are kept in the pink of condition by reason of an independent dust-proof steel gear case and the damage-preventing loop hand-chain guide."

Small Tools are described in Cleveland Hand Book No. 6, published by the Cleveland Punch & Shear Works Company, Cleveland, Ohio. "In each successive step in the manufacture of Cleveland small tools—from the selection of material until the finished product leaves the workshop—great care is exercised to see that every tool 'measures up' to the same high standard which has during the past twenty-five years made an enviable reputation for Clevelands as the Dependable Small Tools. Cleveland small tools are 'made to make good'; therefore, when you specify Clevelands you are specifying small tools that are guaranteed to give maximum of service. Every punching machine should be adapted to use standard tools, as described in detail on pages 4-7 of Cleveland Hand Book No. 6. May we send you a copy?"

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Cleveland No. 1 and No. 3 Wall Radial Drills are described by the Cleveland Punch & Shear Works Company, Cleveland, Ohio, in a bulletin just published. "The power raising and lowering device with which all Cleveland No. 3 Wall Radial Drills are equipped is conveniently located at the bottom of the standard column—is easily accessible and within the reach of the operator at all times. It governs a 6-foot vertical adjustment of the horizontal arm, and is operated by power obtained from the motive power of the machine. Cleveland wall radial drills can be furnished with either direct-connected motive drive or belt drive with countershaft."

G-E Apparatus at the plant of the Maryland Steel Company is described and illustrated in a circular published by the General Electric Company, Schenectady, N. Y. "G-E apparatus has a splendid record at the Maryland Steel Company. The double punch shown, with movable carriage, is but one of many applications of G-E motors at the shipbuilding plant of the Maryland Steel Company, Sparrow's Point, Md. Repeat orders year after year for a long time testify to the splendid satisfaction G-E motors and control devices have given under the exacting conditions met with in shipbuilding. Leading shipbuilding companies using G-E equipment find it is practically indestructible. A G-E motor made in 1893 is still driving the woodworking shop of the Newport News Shipbuilding & Dry Dock Company, which has also used the same G-E motors since 1897 to drive some of its big drydock pumps. Our engineers will be pleased to go over your power problems with you. This places you under no obligation."

"Why You Should Specify Chadburn" is the title of a circular published by the Chadburn (Ship) Telegraph Company of America, Troy, N. Y. "For scores of years our equipment has given the greatest satisfaction of *all* like equipment, until to-day more than 12,000 vessels and liners are carrying it exclusively. All vessels built at the Hog Island and Federal Shipbuilding Company yards are equipped with Chadburn products, as are the ships of the U. S. Navy and the British Admiralty. Engine and twin engine telegraphs, stokehold telegraphs, engine revolution indicators (speed), steering telegraphs, docking and lookout telegraphs, alarm gongs, engine counters, etc. We are prepared to give estimate for complete installations. Prompt deliveries. Send for catalogue."

Kelly Rocking and Dumping Grates are the subject of Grate Catalogue C and Foundry Catalogue G, published by the Kelly Foundry & Machine Company, Goshen, Ind. These catalogues state that Kelly Grates are the boiler makers' choice, and the reasons for this are stated to be as follows: Because Kelly knocking and dumping grates are backed by over twenty-seven years of experience; because Kelly rocking and dumping grates are simple, substantial, efficient, and are favorably known throughout the steam power field; there are no complicated parts to get out of order; they are easily installed, and we guarantee every set to give perfect satisfaction in the strictest sense of the word. Furthermore, our large output of grates and boiler fronts allows us to make you a price that is right. You should have both our Grate Catalogue C and Foundry Catalogue G, with prices, in your files."

Steam-Operated Lighting Generators are described in bulletins published by the A. R. Williams Machinery Company, Ltd., Toronto, Can. "The Watson engine generator equipment illustrated consists of a 7½-kilowatt Watson generator, direct coupled to a Type A American Blower Company high-speed engine. Speed 600 revolutions per minute, 110 volts direct current. Watson generators are built up to the highest electrical standards, carry substantial overloads, and are covered by the most full and complete guarantees. The A B C Engine is complete with cylinder, lubricator, automatic pump oiling system and auto fly-wheel governor."

Marine Lighting and Signaling Apparatus is described in an illustrated bulletin published by the Benjamin Electric & Manufacturing Company, Chicago, Ill. "If there is one place where absence of electrical trouble is absolutely essential it is on shipboard. And in Benjamin Marine Lighting and Signaling Apparatus this advantage is definitely procured. In the Benjamin line all parts are standardized, insuring utmost interchangeability. For instance, junction boxes may be installed and the receptacles, connecting blocks, or switches and covers may be mounted later, as the locations require. This also applies to fixtures—all parts are interchangeable. Such flexibility insures ease and speed of installation, convenience and protection in purchasing and absence of trouble when the ship is in service. We have just published a big illustrated catalogue covering all Benjamin electrical marine devices. You will find it interesting and thoroughly worth while. Write for a copy to-day."

FOR SALE

Triple Expansion Marine Engine 18″ x 32″ x 54″—42″ stroke, complete with jet condenser. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾″ stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

FOR SALE

Two (2) New Roberts Safety Water Tube Boilers 10 feet by 10 feet—63 square feet grate surface, immediate delivery—British Lloyds Classification. For price and full particulars apply to Liberty Steamship Company, 17 State Street, New York City.

The
Shipbuilders' Hand Book
by Harrison S. Taft

Price 15/-

For sale by
BENN BROS., Ltd.
8 Bouverie Street, London, E. C. 4

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"How to Stop Leaks" is illustrated in booklet 75-D, published by the Joseph Dixon Crucible Company, Jersey City, N. J. "All leaks of ammonia, steam and gas waste power at a time when it is the duty of every one to conserve in every possible way. Dixon's graphite pipe joint compound will effectually stop all leaks at joints in pipe lines. Simply because the graphite lubricates the threads and makes it possible to turn joints up tighter than usual. Conversely, graphite permits joints to be opened with ease at any time—no broken fittings—no wasted hours."

Plymouth Manila Wrecking Cable for floating stranded vessels is described in a bulletin published by the Plymouth Cordage Company, North Plymouth, Mass. "Plymouth Manila Wrecking Cable is a hawser-laid rope with plenty of elasticity and minimum unlaying tendency, very important requirements in the floating and salving of stranded vessels. These cables are made from selected grades of manila fiber, and possess extra strength and durability. They are consequently in popular demand and use in all waters. Salving of the American steamer *Redondo*, which recently went around at Dutch Point with a valuable cargo of nitrate from Chile, was successfully accomplished with the aid of two coils of 6-inch and one coil of 7-inch Plymouth Manila Wrecking lines, furnished through a distributor of Plymouth rope at Havana, Cuba. The estimated value of ship and cargo thus saved was $3,000,000, and Plymouth shares in the triumph accorded the contractor in Cuban press reports."

"'Armco' Iron Welding Rods" is the title of a booklet issued by the Page Steel & Wire Company, 30 Church street, New York. "The old theory that successful welding necessitates a choice of one from many compositions of welding rods was based upon the assumption that welding rods should have exactly the same composition as the material to be welded. Experience has shown this to be wrong. Seldom is it possible or practical to determine the exact composition of the material to be welded, and even if it were, the melting of the rod and metal in the presence of surface impurities, gases from the torch, etc., so alters the original filler composition that its true welding value is not the theoretical. The chemists, metallurgists and research engineers of the American Rolling Mill Company and the Page Steel & Wire Company spent years of profound study and experiment in determining the exact conditions existing and the transformations taking place. Their results and actual commercial experience in welding have proven that one composition of rod in two tempers, one for oxy-acetylene and another for electric welding, meets every requirement. The advantage of using Armco Iron Welding Rods of a single composition in two tempers is obvious. A shop doing general welding work, instead of having to carry stocks of many compositions, can meet all requirements from a small stock of Armco Iron Rods, that takes up small space and involves only a small investment. Give Armco Iron Welding Rods at least a trial, and you will be pleased with the first cost, ease of manipulation and reliability of the finished work."

An Angle Bar Planing Machine is one of the machine tools described and illustrated in a catalogue published by Hilles & Jones Company, Wilmington, Del. Capacity to plane 8-inch by 8-inch by ⅝-inch angles and smaller; to plane both edges of the angle at the same passage through the machine to either a square or beveled edge. Fitted with a third tool for planing the heel of the angle. Provided with friction rollers of tough steel castings with serrated faces for gripping and driving the angle bar past the fixed cutting tools. Driving is by 20-horsepower motor, furnished with reversing controller."

"Be Sure It's a Brubaker" is the title of a circular published by W. L. Brubaker & Bros., 50 Church street, New York. "There's a reason—each Brubaker lasts longer—taps more holes per tap. Staybolt taps may be similar in appearance, but when it comes to service records—well, that's where Brubaker taps are distinctive. A high-grade tap, beginning with the selection of tested steel and followed with up-to-date shop methods gained in making a better tap, insures more holes per tap by fully 20 percent. Just ask us to place a Brubaker in your shop for thirty days' trial; you will soon learn the reason why so many leading shipyards specify 'Brubaker' on their requisitions."

"The Sprague Adjustable Loop System" is the title of a bulletin published by the Sprague Electric Works, 527 West Thirty-fourth street, New York. This is a system of overhead electric freight-handling machinery for terminal sheds. The use of overhead systems in terminal sheds is advocated by Sir John A. F. Aspinwall, president of the Institution of Civil Engineers, perhaps the most conservative body of engineers in the world. Part of his inaugural address is reproduced below: "Our exports, again, cannot always be put on board ship at the moment of arrival alongside, as a vessel destined to call at many ports must have her cargo in systematic order, not only in the order of the ports, but also in relation to the character and weight of the articles exported. This means storage in transit sheds before loading, and the picking out, sorting and lifting, very often twice over, of the goods which have arrived. All these little points add to the necessity of eliminating hand labor, and doing by quick-acting machinery that which is necessary to hurry the vessel away to sea, and thus increase the number of voyages per annum. Electric overhead travelers, such as are now used in the most modern railway transit sheds, with a longitudinal traverse of 450 feet per minute, and both across traverse and lifting speed of 150 feet per minute, are probably the most suitable appliances for this work inside the sheds, while outside there should be a liberal supply of quick-acting jib cranes. At the most modern railway goods stations, where the same goods have ultimately to be handled, these quick-acting appliances, in combination with the modern electrically-propelled platform trucks, have been the cause of great economies." The Sprague adjustable loop system is preeminently the overhead system for terminal sheds, because it covers the whole floor area, eliminates all switches and avoids interference between the traveling hoists. Write for bulletins."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

AMERICAN ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 308 Vine St., Camden, N. J.

THE AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 5921 Walnut St., Philadelphia, Pa.
Vice-President—W. A. Leavitt, Jr., New York Shipbuilding Corporation, Camden, N. J.
Secretary—B. G. Barnes, 1596 North Ave., Bridgeport, Conn.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.

MARINE ENGINEERS' BENEFICIAL ASSOCIATION NATIONAL OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Boisville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

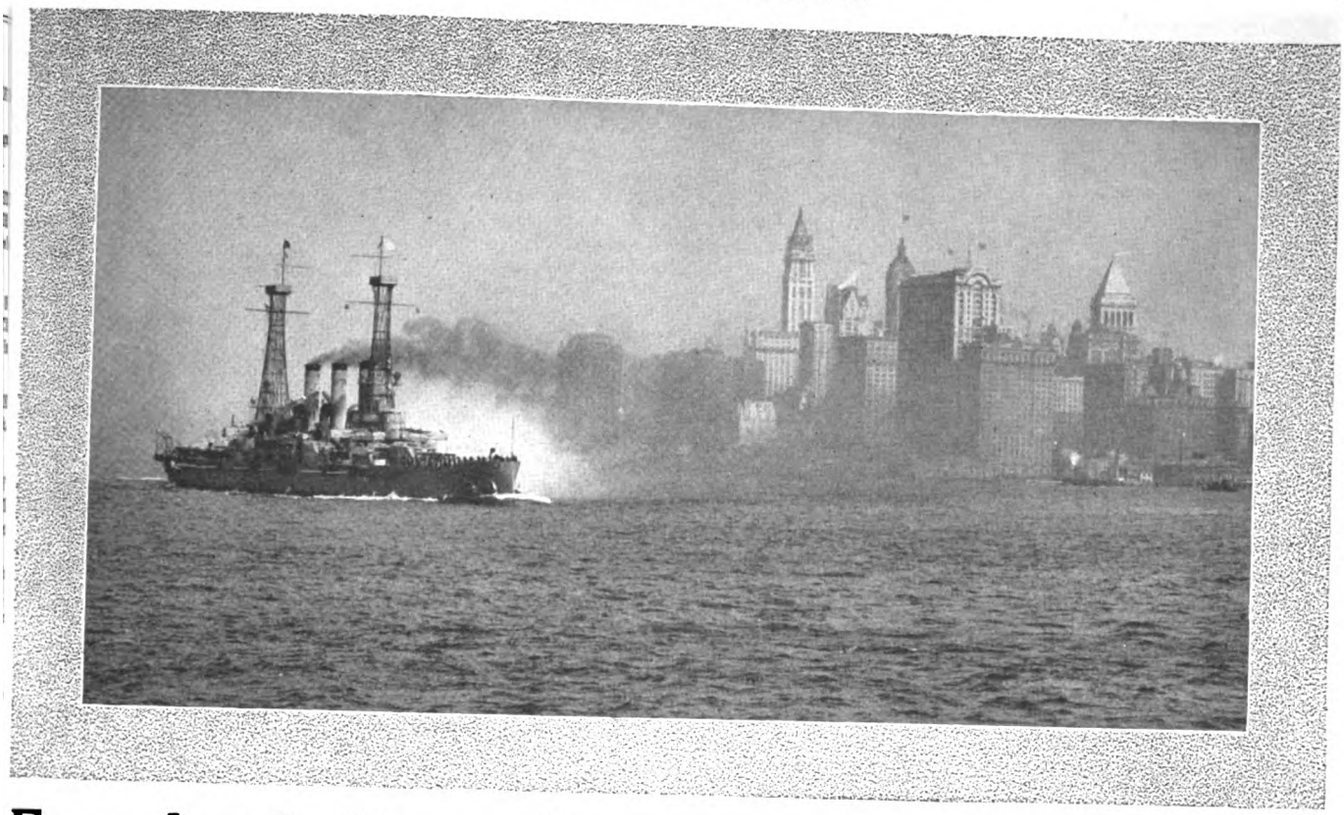
INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

INSTITUTE OF MARINE ENGINEERS INCORPORATED
The Minories, Tower Hill, London

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



From battleship to skyscraper— "85% Magnesia" conserves the Nation's Heat

THE BATTLESHIP'S mighty efficiency is measured by her ability to exploit every pound of coal without waste. Consequently, all boilers and steam pipes must be insulated with the most effective Heat Insulation obtainable.

For this purpose the U. S. Navy has, since 1888, specified "85% Magnesia" coverings on all its ships, —to defend their steam and conserve their coal. The U. S. Shipping Board followed suit.

For many years, our best-built mercantile ships and tugs have also used "85% Magnesia" for the same end.

Our American locomotives are protected by "85% Magnesia," to conserve steam and coal. Our most progressive power-plants, big and small are already insulated with "85% Magnesia," on boilers and pipes,— to get greatest power from least fuel.

THE SKYLINE of New York, colossal and graceful, is equalled by no other city in the world. By day, a monument of commercial supremacy. By night, a blaze of glory.

But,—facing every wind, bare to every wintry blizzard, how are these towering skyscrapers *kept warm?* You, who perhaps can scarcely keep three floors warm, find those topmost office suites comfortable. Why?

The Answer is:—*Nine-tenths of all of New York's largest buildings insulate their heating systems with "85% Magnesia" coverings.*

Hundreds of miles of steam pipes, cutting through party walls, running under city streets, are thus protected.

Every available particle of heat is delivered where it is needed. Otherwise, winter life in these giant structures would be impossible.

That same "85% Magnesia" insulation is used in the best made public buildings, institutions, hotels, apartment-houses, and in many thousands of residences, to exploit heat on least fuel.

You are vitally concerned in the fact that "85% Magnesia" is the supreme Heat-Insulation and Coal Saver.

Definite Proofs

For two years the Mellon Institute of Industrial Research has conducted experiments to prove the definite degree of its efficiency under varying conditions of temperature and pressure. A Table of the Monthly Coal Savings in Dollars and Cents by use of "85% Magnesia" has been prepared by this Institute, and the Magnesia Association will mail it to you for the asking. Also the illuminating booklet, "Let '85% Magnesia' Defend Your Steam." If you are an engineer or architect, ask us for the Specification for the scientific application of "85% Magnesia," compiled and endorsed by the above Institute.

MAGNESIA ASSOCIATION of AMERICA

85% MAGNESIA UNIVERSAL COAL SAVER

721 Bulletin Building Philadelphia, Penna.

Executive Committee, Wm. A. Macan, *Chairman*
George D. Crabbs, The Philip Carey Co. . . . . Cincinnati, Ohio
Alvin M. Ehret, Ehret Magnesia Manufacturing Co., Valley Forge, Penna.
J. R. Swift, The Franklin Manufacturing Co. . Franklin, Penna.
Richard V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Penna.

Copyright 1919, M. A. of A.—Permission to reprint by application

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Oil-Burning Vessels on the Great Lakes

Two storage tanks of 10,000-barrel capacity, it is planned, will be built at Cleveland to provide crude oil for oil boats operated by the Emergency Fleet Corporation on the Great Lakes. About one hundred Government coal burners will be in operation on the lakes this season is the estimate of Walter M. Williams, Great Lakes assistant director of operations of the Emergency Fleet Corporation. Probably 154 Government oil-burning ships will be transferred to Atlantic service from the Great Lakes.

New York Harbor Piers Not Utilized to the Best Advantage

Large water-front areas of New York harbor, which should be available for the docking of vessels engaged in ocean commerce, are at present occupied by the various city departments.

A short review of the available piers will show how well these might be utilized. For example, the pier at the foot of East Twenty-sixth street, now used by the Public Charities, is 707 feet long by 60 feet wide, covered. The Dock Department yard, at East Twenty-fourth street, might also be utilized for the building of large piers. The entire water front from Grand street to East Thirty-first street could be used for shipping were the shell reef, over which there is about 9 feet of water, removed. At the site of the present ferry slip at the foot of Grand street another large pier could be built.

The slip beside Pier 1, the water of which is over 30 feet deep, is at present utilized for barges only. Pier 32, North River, would also be a suitable situation for a large ocean steamship pier. Other pier sites now used by the city include: East River district, from Twenty-sixth street to Twenty-ninth street, an area large enough for about six piers; eleven piers and other water-front locations occupied by the Fire Department; eight piers by the Health Department; two by the Naval Reserve, and four by the Water Supply, Gas and Electricity Departments.

At the time these various organizations were first given the use of the present sites the efficient use of every foot of deep-water front along New York harbor was probably not as essential as it is at present. The fact that these sites have in the past been used for projects which could be handled in a different manner should not deter future action regarding the reallotment of the water frontage.

Capacity of Manchester Ship Canal

The capacity of the Manchester Ship Canal, Manchester, England, as determined from the yearly report, shows that fully 3,500,000 tons were carried upon this inland waterway. The receipts show an increase of $600,000 to $700,000 over similar receipts for 1917.

Australian Government Ship Company Self-Supporting

The Austral Line of ships, bought by the Federal Government of Australia, has paid for itself during the two years of operation and realized a profit of $75,000. During the first year the line made, above expenses, nearly $5,000,000. The original cost of the ships was $9,832,500.

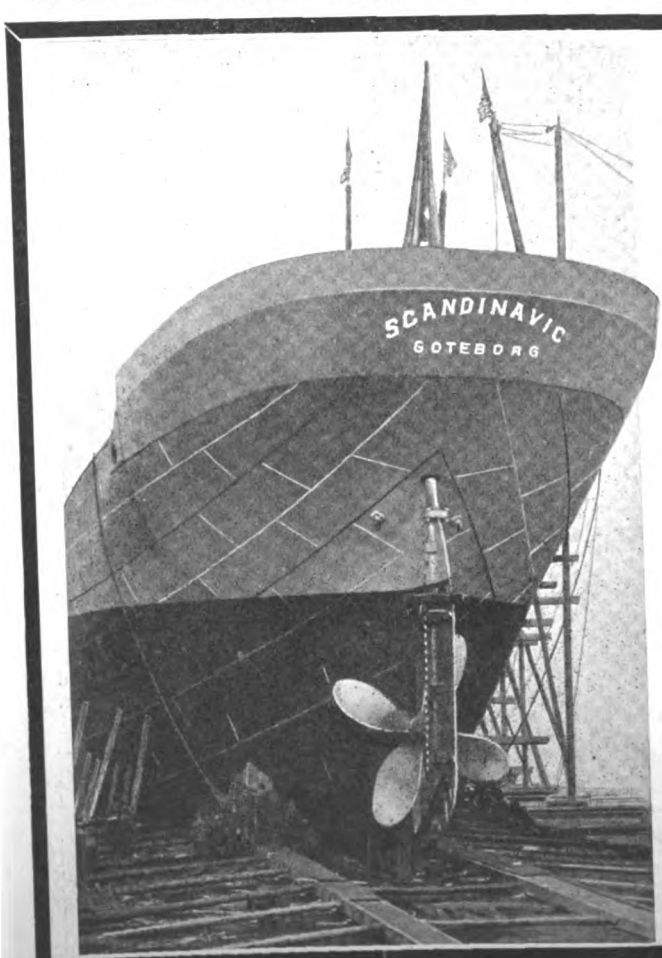
This satisfactory accomplishment has been cited by several authorities advocating Government management of American shipping operations.

British Vessels Available for Pacific Trade to Australia

Between the middle of January and April 1 the British Government reports that eighty-four large vessels will arrive in Australian ports. April bookings to date show that at least 700,000 tons of overseas shipping is due. Of this amount it is calculated that 500,000 tons reached Sydney harbor in March.

To Paris Via Vigo

The London *Times* reports that a new Spanish railway is projected to run from Vigo to the French frontier, as part of the American project for developing the port of Vigo, by building docks and warehouses and all the equipment of a great commercial harbor. The realization of the project would give America a commercial entrance into Europe.



WE HAVE MADE

PROPELLERS

FOR THE FOLLOWING CONCERNS:

American and Cuban S. S. Co.
Baltimore Dry Dock & Shipbuilding Company
Bethlehem Shipbuilding Corporation
Canadian Vickers, Ltd.
Federal Shipbuilding Company
Hog Island Shipyard
Manitowoc Shipbuilding & Dry Dock Company
Newport News Shipbuilding & Dry Dock Co.
New York Shipbuilding Corporation
Norfolk and Washington Steamship Company
Pocahontas Fuel Company
Pusey and Jones Company
Red "D" Line of Steamships
Standard Shipbuilding Corporation
Standard Motor Construction Company
Standard Oil Co. of N. J.

Which Proves

that we can fill your requirements

"WRITE FOR CATALOG"

AMERICAN MANGANESE BRONZE COMPANY

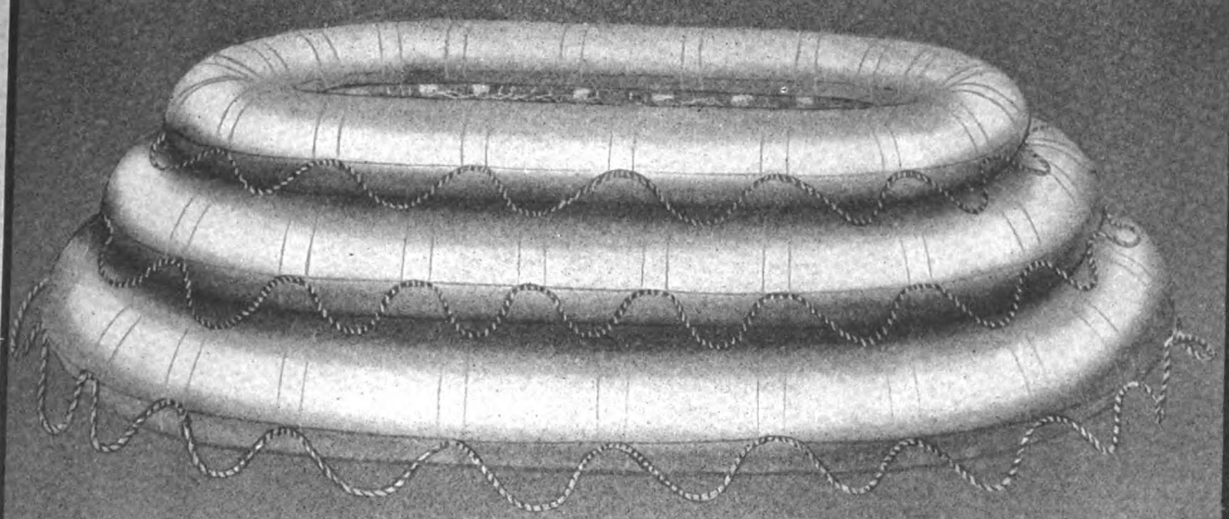
HOLMESBURG, PHILADELPHIA, U. S. A.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. **50 E. 42nd Street, New York**

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Comparison of Shipbuilding Costs in the British Isles, Canada and the United States

Vice-President Powell, of the Bethlehem Shipbuilding Corporation, reports that British shipbuilding costs are considerably lower than in the United States, probably as much as $100 a ton.

Figures at hand show that in Canada labor and material costs are more than $50 a ton higher than British costs, on the basis of prices in effect before the armistice. The following table, published in the *Montreal Star*, contrasts the labor and material costs of Canadian and English companies based on an 8,100-ton boat:

	England.	Canada.	Increase Per d.w. Ton
Steel plates and shapes, per ton	$53.50	$98.28	....
2,500 tons in 8,100-ton d. w. boat	133,750	245,700	$13.80
Other hull material	114,000	195,000	10.00
Engines & boilers, labor.....	43,140	95,000	6.40
Engines & boilers, material..	98,600	160,000	7.50
Hull labor	148,700	267,660	14.70
			$52.40

Ten Dutch Vessels Will Be Returned

The Royal Netherlands Steamship Company and its subsidiary, the Royal Dutch Indian Mail, have received notification that ten of the vessels which were commandeered on March 20, 1918, by the United States Government will be returned during April.

INCORPORATIONS

The Nashville Navigation Company, Nashville, Tenn., has been incorporated for the purpose of inaugurating boat service on the Cumberland River. The following officers have been elected: H. G. Hill, president; Eugene O. Harris, vice-president; Walter H. Clarke, secretary, and Randal Curell, treasurer.

Announcement is made of the incorporation of the American Mercantile Company, Inc., at Boston and Buenos Aires, for the purpose of carrying on a general export, import and transportation business. Capital is entered as $150,000. Incorporators are Edmund H. Durgin, William H. Hodgkin and Geo. E. Kelleher, of Boston.

The Mississippi Shipping Company, a $1,000,000 corporation which has been formed to furnish steamship service from New Orleans and other Gulf ports to all world ports, is announced as a strictly New Orleans and Middle West corporation. The officers of the company are as follows: M. J. Sanders, president; T. F. Cunningham, vice-president, and Rudolph S. Hecht, of the Hibernia Bank, New Orleans, secretary-treasurer.

The Alabama Steamship Company, Mobile, Ala., has been incorporated at $625,000 to conduct a general steamship and transportation business. Jewett M. Scott, C. G. Parlin and E. G. Ricarly are the incorporators.

The Steers Terminal Company, 17 Battery Place, New York City, has been incorporated, with a capital of $50,000, to carry on a wharfage and warehouse business.

Chinese merchant men in San Francisco have subscribed $3,000,000 for the establishment of a Chinese commercial organization to aid shipping.

The Avance Navigation Company, Inc., 32 Broadway, New York City, has been incorporated, with a capital of $50,000, by Frederick H. Simmons and L. E. Brown, to carry on transportation and trade.

The Job Shipping Corporation, Wilmington, Delaware, has been incorporated, with a capital of $600,000, to engage in commerce and navigation.

The Bright Navigation Corporation has been formed, with a capital of $50,000, by Ralph J. M. Bullowa, Alex Burg and L. E. Brown, 32 Broadway, New York City, for trade and transportation purposes.

The National Steamship Lines, Ltd., New Orleans, La., has been incorporated, with a capital of $100,000, for the operation of vessels. The incorporators are Vincent Gilroy, Winter Russell, Richard Townsend, Richard Chairello, Gus G. Chairello, Vincenzo Chairello and George Kimball.

The Broad Steamship and Navigation Company, Inc., has been organized by L. E. Conklin, F. C. Harris and W. W. Shack, 24 Stone street, New York City, with a capital of $25,000, to carry on a transportation and navigation business.

STRATFORD SPECIAL NO. 1 MARINE OAKUM

receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. It meets the requirements of all of the United States Government specifications. For years we have guaranteed the quality of each bale to be standard of excellence and returnable at our expense if otherwise. More of this grade Oakum has been used by the United States Government and its contractors than all other makes combined, yet, not a single bale has been condemned or rejected, whereas it has replaced the condemned Oakum of almost every other make. Our experience, quality and service are worth more to you than we ask.

GEORGE STRATFORD OAKUM COMPANY, **Jersey City, N. J.**

WE ARE SPECIALISTS IN

TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS

IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.

MAKERS OF IRVING'S SUBWAY TRADE MARK GRATING THE RETICULATED KIND

Real WOLVERINE Power

"The Motor With the Bore & Stroke"

Fuel Cost Reduced

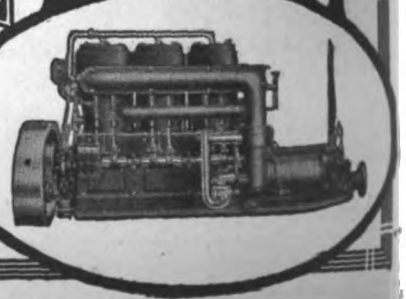
from 70 to 80% without sacrificing reliability, flexibility or control. Perfect combustion on Kerosene or lowest grade of Coast Distillate.

Sizes from 5 to 200 H. P.
1 to 6 Cylinders

Kerosene

The gasoline question has been solved by the

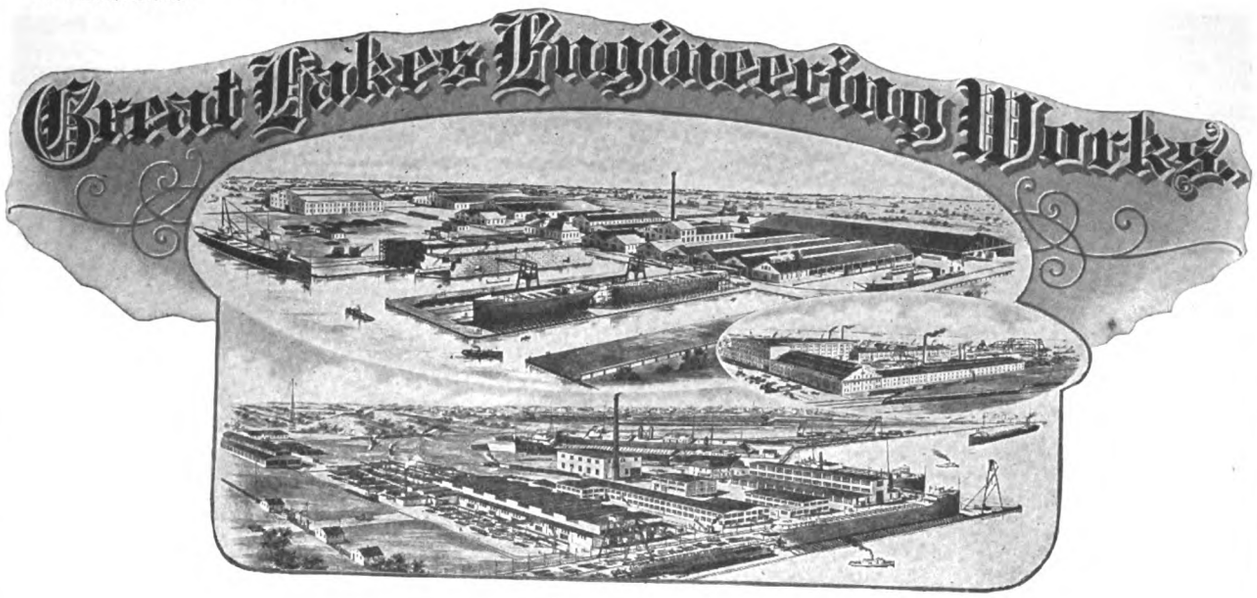
WOLVERINE MOTOR WORKS
Bridgeport, Conn., U. S. A.



When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

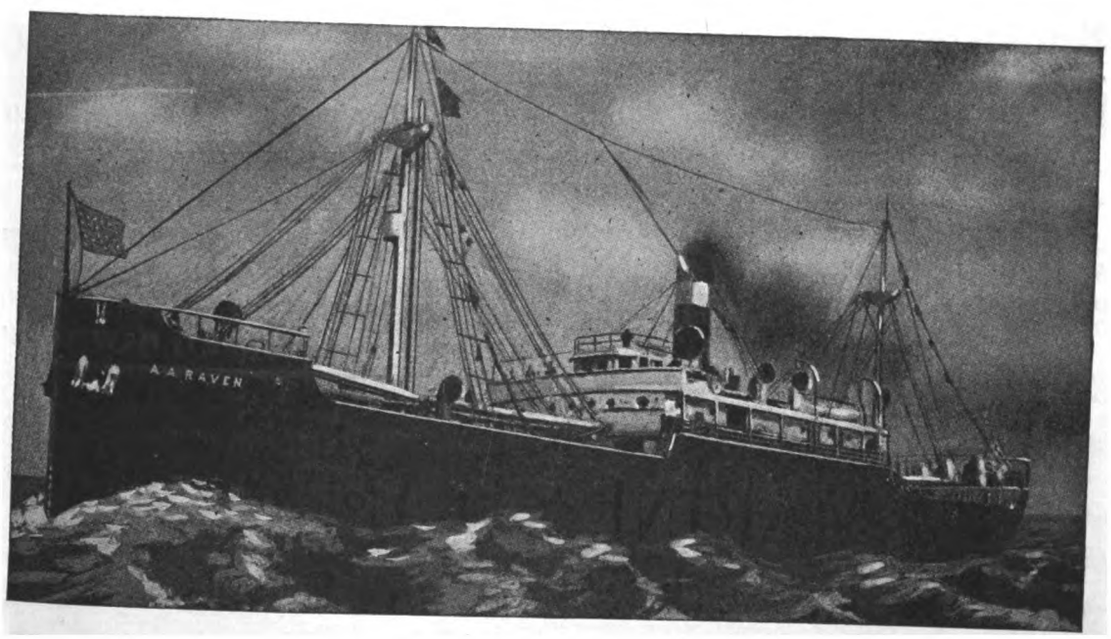
Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ANTONIO C. PESSANO, CHAIRMAN OF BOARD
JOHN R. RUSSEL, PRESIDENT
H. W. HOYT, VICE PRESIDENT & TREASURER
J. A. UBSDELL, VICE PRES. & GEN'L MANAGER
F. G. MORLEY, SECRETARY



Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

BUSINESS NOTES

Charles W. Undehaun, formerly general Eastern sales manager for the Bailey-Drake Company, Chicago, Ill., has been appointed Eastern branch manager of the Black & Decker Manufacturing Company, 105 South Calvert street, Baltimore, Md.

The firm of Bloomfield & Bloomfield, 6 Beacon street, Boston, Mass., is in a position to furnish valuable information regarding industrial management. Meyer Bloomfield, one of its organizers, took charge of the Industrial Service Department of the United States Shipping Board Emergency Fleet Corporation at the invitation of General Goethals, and has recently studied industrial conditions in Great Britain.

J. F. Mackin, Columbus, Ohio, is representing the Black & Decker Manufacturing Company, 105 South Calvert street, Baltimore, Md., throughout the entire State of Ohio.

F. S. Healey has been appointed manager of sales of the Epping-Carpenter Pump Company, Pittsburgh, Pa., in addition to his office as chief engineer. F. S. Woods is now located in New York City as Eastern Sales manager; Albert A. Scheuch has been appointed assistant sales manager, and Paul D. Goodman, formerly of the McClary-Jemison Machinery Company, Birmingham, Ala., has been added to the sales personnel.

Announcement is made by the Steward Davit & Equipment Corporation, 17 Battery Place, New York, that Captain John F. Blain has resumed his prewar connection as Pacific coast agent, Coleman Building, Seattle, Wash.

F. V. Sargent has been appointed district sales manager in the Boston territory of the Cleveland Pneumatic Tool Company, Chicago, Ill. Mr. Sargent will succeed F. S. Egleston, with headquarters at 182 High street, Boston, Mass.

C. W. Johnson has been made assistant works manager of the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

V. L. Sanderson, who has been in charge of the Philadelphia district of the Terry Steam Turbine Company, 605 Widener building, Philadelphia, Pa., since April, 1917, is now assisted by James H. Weir.

The Steam Motors Company, Springfield, Mass., Manufacturers of steam turbines, announces that it has appointed Raines Kessler and Louis Lanyi, transacting business under the name of the Engineering Service Sales Company, with offices at 8 West Fortieth street, as their New York representatives for the territory comprising the eastern portion of New York State, the northeastern portion of Pennsylvania, the northern half of New Jersey, and Connecticut west of the Connecticut River.

The Chicago Pneumatic Tool Company, Chicago, Ill., announces the discontinuance of its office at Wichita, Kan., and the transfer of all stock to the office at Eldorado, Kan. The company has also established offices at Tulsa, Okla., at 313 Richards building, with warehouses at 102 North Cheyenne street.

The Badenhausen Company, Philadelphia, Pa., announces the opening of a sales office by A. D. Neeld, Jr., at 311 Jenkins building, Pittsburgh, Pa., and another office under the management of J. F. O. Stratton, 1225 Marquette building, Chicago, Ill.

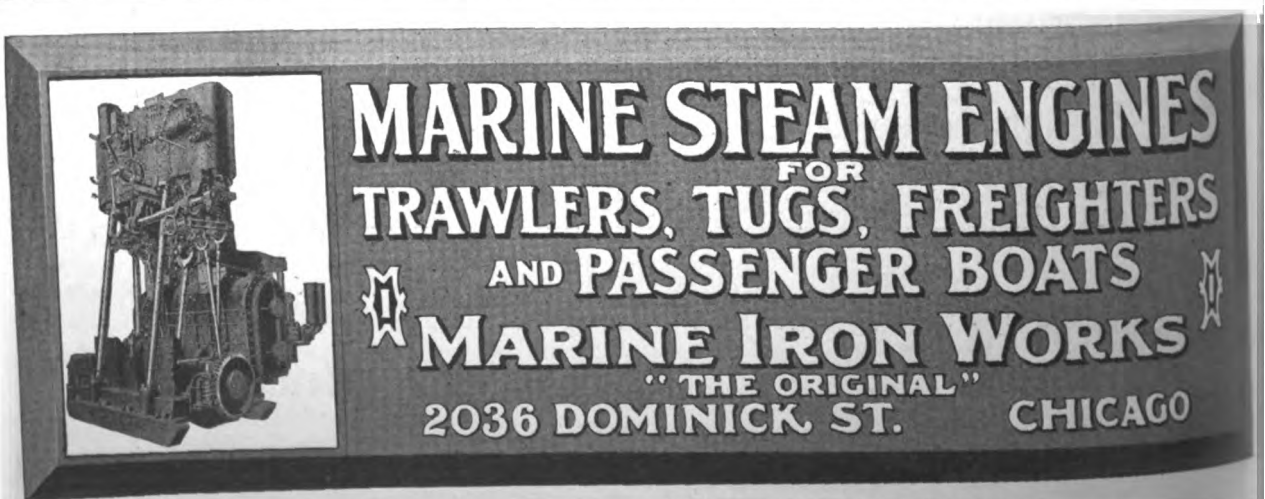
The Chicago branch of the General Asbestos & Rubber Company has established new offices at 14 North Franklin street, Chicago, Ill. This branch of the General Asbestos & Rubber Company, which has home offices in Charleston, S. C., will carry a complete stock of the company's products so that orders may be supplied promptly.

Theodore R. Hermanson, formerly of the Harrison works of the Worthington Machinery Corporation, has become works manager of the Epping-Carpenter Pump Company, Pittsburg, Pa.

The Wetmore Reamer Company will hereafter be known as the Wetmore Mechanical Laboratory Company, Milwaukee, Wis. This company, after completing contracts with various munition makers in Canada for the supplying of expanding reamers, hobs, taps, lathes and boring bar tools, is now resuming its former tool business. P. H. Dorr has been appointed secretary and sales manager.

INTERNATIONAL
COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS
In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually
Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING
INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N.Y.

IMPORTANT NOTICE TO SUBSCRIBERS
Our subscribers are requested to notify us immediately whenever they change their address. Otherwise they cannot keep their files unbroken. If subscribers move without notice to us, we cannot duplicate numbers already sent to their old addresses, as many times they are out of print.
MARINE ENGINEERING 6 EAST 39th STREET, NEW YORK



When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

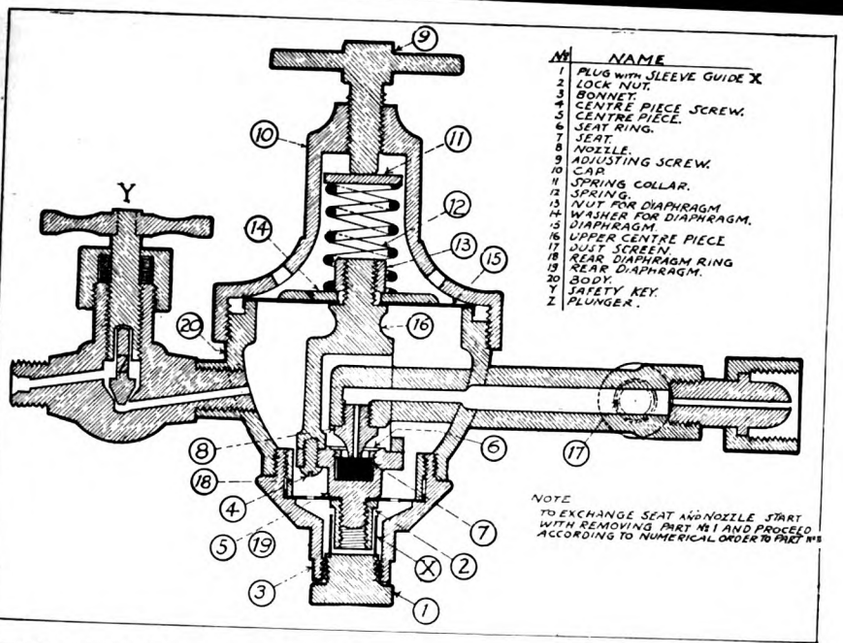
Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

GENERAL WELDING & EQUIPMENT CO.

G.W.&E.CO.

107 MASS. AVE. BOSTON, MASS.

IN USE AT
BETHLEHEM SHIPBUILDING CORP. FORE RIVER, SQUANTUM, PROVIDENCE.
TEXAS STEAMSHIP CO.
CANADIAN VICKERS CO.
WATERTOWN ARSENAL
LORD CONSTRUCTION CO.
GENERAL ELECTRIC CO.
CANADIAN PACIFIC R. R.

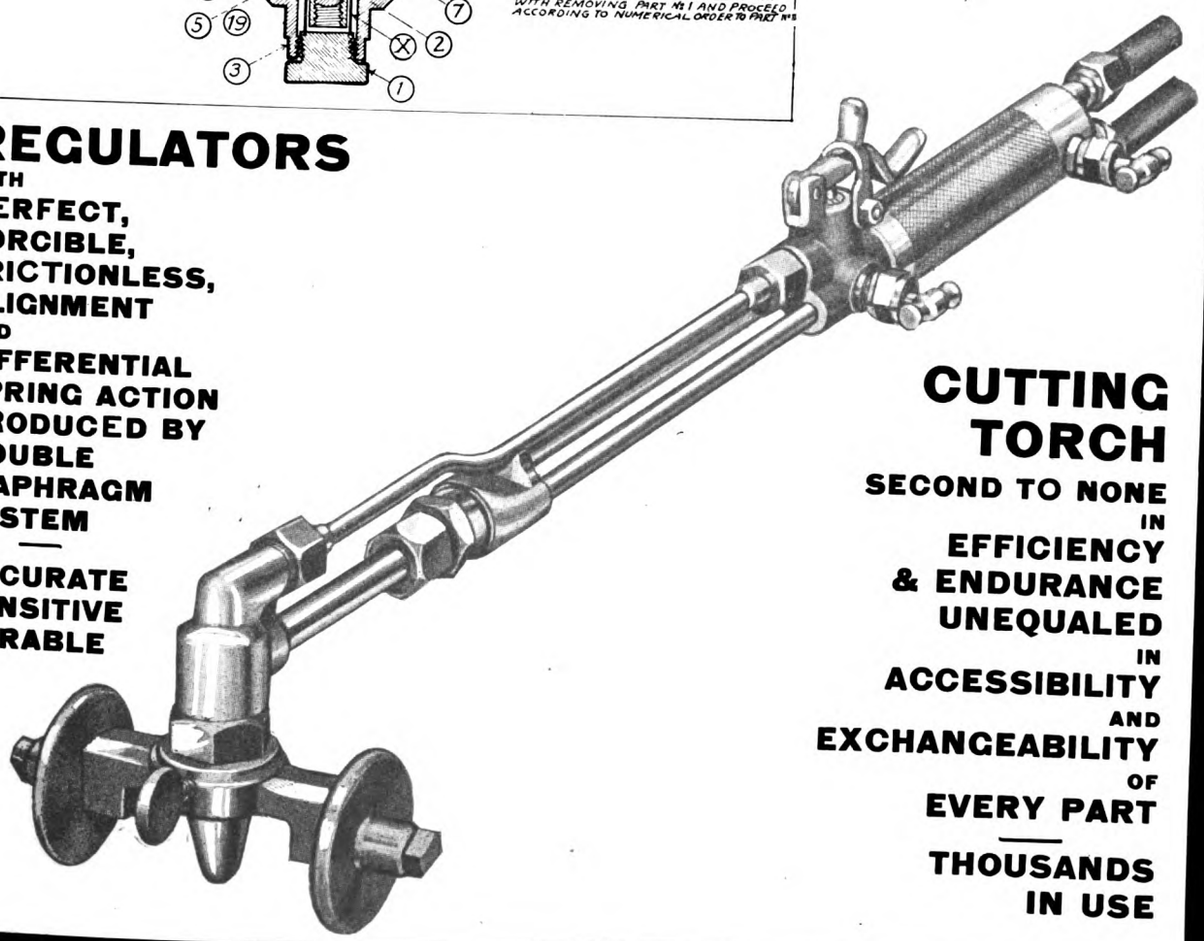


No	NAME
1	PLUG with SLEEVE GUIDE X
2	LOCK NUT.
3	BONNET.
4	CENTRE PIECE SCREW.
5	CENTRE PIECE.
6	SEAT RING.
7	SEAT.
8	NOZZLE.
9	ADJUSTING SCREW.
10	CAP.
11	SPRING COLLAR.
12	SPRING.
13	NUT FOR DIAPHRAGM
14	WASHER FOR DIAPHRAGM.
15	DIAPHRAGM.
16	UPPER CENTRE PIECE
17	DUST SCREEN.
18	REAR DIAPHRAGM RING
19	REAR DIAPHRAGM.
20	BODY.
Y	SAFETY KEY.
Z	PLUNGER.

THE TWO
FUNDAMENTALS
OF A PERFECT
CUTTING
EQUIPMENT

REGULATORS
WITH
PERFECT,
FORCIBLE,
FRICTIONLESS,
ALIGNMENT
AND
DIFFERENTIAL
SPRING ACTION
PRODUCED BY
DOUBLE
DIAPHRAGM
SYSTEM

ACCURATE
SENSITIVE
DURABLE



CUTTING
TORCH
SECOND TO NONE
IN
EFFICIENCY
& ENDURANCE
UNEQUALED
IN
ACCESSIBILITY
AND
EXCHANGEABILITY
OF
EVERY PART

THOUSANDS
IN USE

Generated on 2024-09-12 08:27 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

Whitlock Rope Schedules.—A new and useful set of rope schedules has recently been issued by the Whitlock Cordage Company, 46 South street, New York City. The schedules are devoted to the company's Whitlock All-Manila Rope, and consist of two tables, which are conveniently arranged for ready reference. One table gives the sizes, both diameter and circumference; weights, in coils and per 100 feet; lengths, for full coils and feet in one pound, and strengths, both breaking strengths and working strains, the latter being figured at about 20 percent of the breaking strengths for efficiency in everyday service. In the other table is given the approximate cost per 100 feet for all sizes of Whitlock All-Manila Rope from 3/16 diameter to 8-inch circumference at basis prices from 10 to 30 cents per pound. This table is printed in black and red inks, the basis price and the item pound price of each size being printed in red ink, and the cost of 100 feet of each size given in black ink. At the foot are instructions for obtaining costs per 100 feet at prices higher and lower than those given in the tables, as well as for obtaining the cost of any number of feet. Figures in the table are calculated on the net weight of rope, and the tare is stated to average not over 1½ percent. Whitlock Rope Schedules measures 9 inches by 11 inches, is substantially bound and varnished inside to prevent soiling, and will be found extremely convenient for desk or counter use. Copies may be obtained from the Whitlock Cordage Company on request.

"How to Start Airco Torches and Equipment for Oxy-acetylene Welding and Cutting" is the title of a 34-page catalogue, illustrated in several colors, just published by the Air Reduction Company, 120 Broadway, New York. "It is intended that this book shall supply sufficient information to make it comparatively easy for an operator to quickly and correctly connect up Airco-Vulcan torches and regulators and to operate them properly. On several of the pages also will be found suggestions for the welder, which, if carefully followed, should go far toward obtaining the best results from the Airco-Vulcan apparatus. Little difficulty should be experienced in learning how to operate the Airco-Vulcan torches and equipment. In fact, when an occasional beginner fails to obtain satisfactory results at once, it is usually found that a little better understanding of the apparatus so improves its operation as to entirely remove the trouble. If every oxy-acetylene operator would become thoroughly familiar with his torches and regulators much more satisfactory work could be accomplished.

Many new tools and devices have been introduced in shops and manufacturing plants of late years, but few have proved as serviceable and successful as the Oxy-Acetylene Torch. It is to be found in active use in the shipyard, the machine shop, the foundry, the repair shop, the steel mill, on construction work, in the railroad shop, in the repair garage—its application in the engineering world is universal. A multitude of men and women workers are using it with fine success."

Westinghouse New Annual Catalogue.—The Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has issued a complete catalogue in which all of its electrical supplies are listed. In compiling the catalogue every effort was exercised to make it of the greatest convenience to purchasers. The catalogue is made up of 1,264 pages of description pertaining to the products of the company, and a score of other pages contain a complete cross index, an index of style numbers, and a table of "Approximate Cost Multipliers," which enables one to figure the approximate cost of all supplies listed. Although the book is called a catalogue it contains a vast amount of information of a technical and engineering nature. Practical suggestions for the use of many kinds of apparatus for the transmission and utilization of electric power are given. It is planned to issue this catalogue annually. The publication of this catalogue is quite noteworthy, as it is the first book of such a nature published by an electrical concern having the wide diversity of products sold by the Westinghouse Company.

Boiler Tube Caps Kept in Prime Condition

The way to do it is to smear them with Dixon's Graphite Pipe Joint Compound before replacing. This compound never "sets" or hardens like cement. The caps can be removed and replaced whenever desired, without the slightest trouble. It will never be necessary to regrind them to get a steam-tight fit with the seats.

Dixon's Graphite Pipe Joint Compound is equally valuable for all threaded or flanged joints, for bolts and nuts of all kinds, metal gaskets, etc.

It makes the tightest joints, prevents rust and corrosion and does not get hard or brittle.

For more complete information write for Booklet No. 75-D.

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY

ESTABLISHED 1827

Why Rent Radio Apparatus?

K. & C. apparatus is sold outright—and experience, times without number, has disclosed that it quickly pays for itself.

Many of the greatest liners that plow the seven seas are now equipped with K. & C. Radio apparatus. Foreign Governments are using it. Big land stations all over the world are equipped with it.

The remarkable simplicity, extensive range and possibility of buying the apparatus outright are the three prime factors which have brought K. & C. Radio apparatus into such broad general use.

Let us tell you more about this apparatus which has proved so eminently satisfactory that the plant behind it has grown so rapidly that it is now conceded to be the largest in the world. Write us to-day for full particulars about K. & C. Radio apparatus.

Kilbourne & Clark Manufacturing Company, Seattle, U. S. A. Cable Address, "Kilbourne" Branches, 149 Broadway, New York, N. Y., and No. 1 Drumm St., San Francisco, Cal., U. S. A.

Kilbourne & Clark

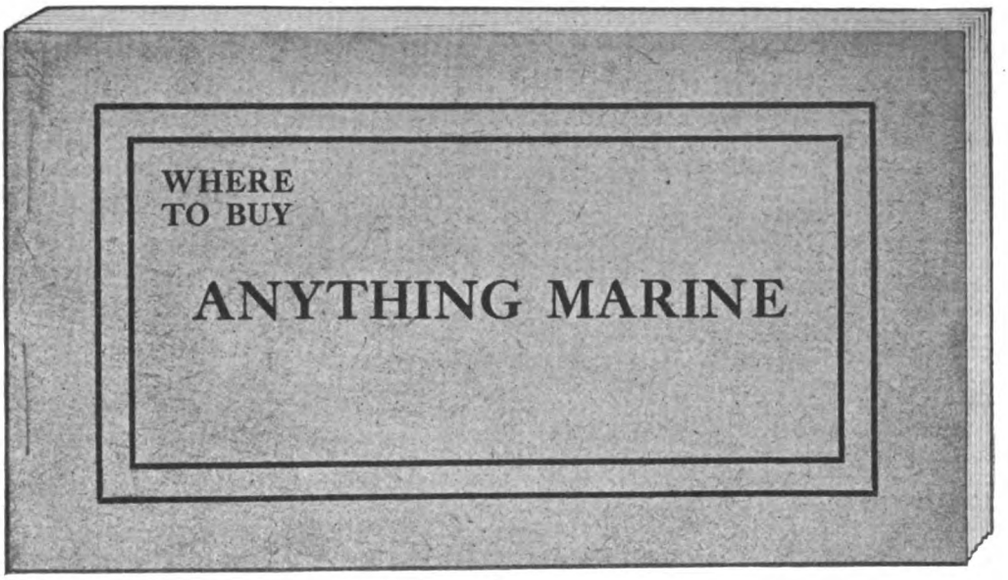
Kilbourne & Clark RADIO

-the Big Word in the Wireless World

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SEND FOR THIS BOOK

—FREE—



THE 1919 DIRECTORY

FOR

BUYERS OF ANYTHING MARINE

(SIZE 6" x 4")

NO MATTER WHAT YOU WANT PERTAINING TO THE MARINE FIELD, THIS HANDY LITTLE DIRECTORY WILL TELL YOU HOW TO GET IT PROMPTLY.

SEND FOR YOUR COPY TO-DAY—NO OBLIGATION.

MARINE ENGINEERING

6 EAST 39th STREET NEW YORK

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Benjamin Marine Lighting and Signaling Apparatus is the subject of a catalogue just published by the Benjamin Electric Manufacturing Company, Chicago, Ill. "In this catalogue are illustrated and described the Benjamin marine lighting and signaling apparatus which are in general use in the shipbuilding industry. The wide experience of Benjamin engineers in laying out and manufacturing electric lighting and signaling apparatus has been recognized by both the engineers and builders in charge of America's ship construction. In the Benjamin line all parts are standardized to the highest point in order that the utmost interchangeability may be possible. Junction boxes may be installed and the receptacles, connecting blocks, or switches, and covers may be mounted later, as the locations require. The same applies to fixtures. In them all parts are interchangeable. Such flexibility insures ease and speed of installation, convenience and protection in purchasing and absence of trouble when the ship is in service. To meet the demand for an insulation of a superior mechanical strength and insulating quality, current carrying parts of Benjamin marine fittings are mounted on bases of high heat molded insulating material. Both interchangeability and improved insulation are but one of a number of features contributing to Benjamin superiority, and are mentioned here because they are the two developments unanimously urged by shipbuilding engineers. Throughout this catalogue an individual number has been given to each item, so that long descriptions in ordering are not necessary. Each device is listed as a unit, and in addition the several parts which comprise it are listed separately. The Benjamin Electric Manufacturing Company welcomes correspondence on electrical marine devices of any character, and stand ready to assist in designing special units to meet unusual conditions."

Machinists' Supply Catalogue No. 91 has just been published by the Whitman & Barnes Manufacturing Company, Akron, Ohio. "This catalogue covers the complete list of products manufactured by us in the machinists' supply line—twist drills, reamers, wrenches and cotter pins. The maintenance of the quality of our products is the chief aim of our manufacturing organizations, continuing uninterruptedly the policies established sixty-five years ago. At our Akron, Ohio, factory we manufacture carbon and high-speed twist drills and reamers exclusively. Our Chicago factory is devoted to the manufacture of screw and drop-forged wrenches, spring cotters and special forgings. While we manufacture unrelated lines of tools, their production is the output of two separate factories, each governed by its own organization of specialists. Correspondence will be facilitated and accurate information insured if you will use the list numbers, terms and descriptions accompanying the lists, both in the headings and foot notes. When referring to special tools or forgings give a concise description and send sample or sketch showing dimensions with your specifications. We invite your inquiries, specifications and orders, assuring you of our appreciation of any opportunity to quote prices and give information pertaining to our lines."

The De Laval Method of Purifying and Reclaiming Oils is the subject of Bulletin No. 103, published by the De Laval Separator Company, 165 Broadway, New York. "It tells a remarkable story of how the De Laval centrifugal oil purifier saves oil and insures longer of marine engines. Shipbuilders, shipowners, designers, chief engineers and others interested in these vital problems are invited to send for the bulletin—no obligation is incurred."

Bituco Solution and Enamels are described in a circular published by the Bituco Manufacturing & Chemical Company, Inc., 422 Commercial Trust building, Philadelphia, Pa. "Bituco solution and enamels are especially adaptable to the preserving of coal bunkers, tank tops, peaks, inner bottoms or ballast tanks, fresh water tanks, wing tanks, bilges, chain lockers, engine and boiler seatings and foundations, etc. Bituco dries quickly with a hard enamel finish, and will not flake or crack. Bituco solution and enamel are the products of natural bitumens. They carry all the elements needed to protect iron and steel from corrosion, and should not be confounded with materials of similar appearance containing asphaltum or petroleum residues. Bituco products are not soluble in gasoline."

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
6 EAST 39th STREET, NEW YORK

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

Cumberland Shipbuilding Co.
SHIPBUILDING AND REPAIR PLANT
SOUTH PORTLAND, MAINE
Telephone 6936
Builders and repairers of all types of wooden vessels.
New Marine Railway of 2,500 tons capacity. Inquiries solicited for estimates, costs and dates. Most modern shipbuilding plant on the Atlantic Coast, with every facility for expeditious work. Most accessible harbor on the Coast.

OVER
350 VESSELS
(NOW BUILDING)
WILL CARRY
PROPELLERS
DESIGNED BY
THE AMERICAN SCREW PROPELLER CO.
1326-28 CHESTNUT ST., PHILADELPHIA, PA.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158 / http://www.hathitrust.org/access_use#pd-google
Public Domain, Google-digitized

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Carwen Static-Dynamic Balancing Machine is the subject of a circular published by the Carlson-Wenstrom Company, Erie avenue at Richmond street, Philadelphia, Pa. "With the rapid adoption of turbine-driven machinery, and the increased speed at which it is to-day considered safe to run almost all classes of machines, the necessity of eliminating vibration becomes more and more important. With the general increase in speed, not only is there more stress, but the tendency towards vibration has become much greater, and consequently the damaging effects resulting have grown in proportion. The greater the speed at which a machine is run the less will be the amount of out-of-balance necessary to cause vibration, and the more intense the vibration the greater will be the tendency towards loosening of parts, opening of bearings, springing of foundation, etc. Therefore, it becomes a matter of great importance that machine parts that travel at a high rate of speed should operate without excessive vibration. No matter how carefully an electric armature, automobile crankshaft, turbine rotor, centrifugal blower, in fact any machine traveling at high rate of speed, be made, it is practically an impossibility for it to leave the mechanic's hands in true balance. Through the efforts of our engineers we are able to place on the market the latest type of the Carwen-Static-Dynamic Balancing Machine. With this latest creation it is possible to determine within a few moments the exact plane of unbalance, together with exact amount of unbalance, by simply applying the readings of the machine to chart furnished, showing exactly the amount of metal to be added or removed, and at what points to produce a perfect running balance. The production obtained depends upon the size and weight of the object to be balanced. On small pieces it is very great. The entire process, for instance, of setting up an object weighing approximately 125 pounds, measuring the unbalance and reading chart takes less than five minutes in a Carwen machine, and the result is better than that heretofore obtained with hours, sometimes days, of careful trial by the hit-and-miss method, and there is absolutely no guesswork about the reading."

Hanna Riveters are described and illustrated in a catalogue published by the Vulcan Engineering Sales Company, 1755 Elston avenue, Chicago, Ill. "Is the portable riveter you are going to buy designed with an eye toward the convenience of the operator, or is it so cumbersome as to hamper and hinder his movements? Hanna riveters are made in many types and sizes, but in all of them the same fundamental principles have been retained. They are the result of careful study of actual operating conditions. Used in practically all shipbuilding plants throughout the country. Write for catalogue, which illustrates and describes these machines."

"Useful Knots and How to Tie Them." Anyone who wishes to learn how to tie knots of all kinds should write to the Plymouth Cordage Company, North Plymouth, Mass., and ask for a copy of their illustrated booklet "Useful Knots and How to Tie Them." It will be sent free to any of our readers upon request.

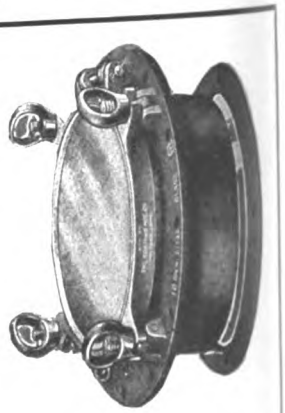
Tests of the Badenhausen preheater type boiler are the subject of Bulletin No. 101, which has just been published by the Badenhausen Company, 1425 Chestnut street, Philadelphia, Pa. This bulletin gives full details of tests of the Badenhausen boiler installed at the Ford Motor Company's Detroit plant. The Badenhausen Company will be glad to send copies to anyone upon request.

Air Compressors are described in Bulletin No. 3230, just issued by the Ingersoll-Rand Company, 11 Broadway, New York. "There's a little something that enters into the building of an Ingersoll-Rand class 'ER' or 'FR' compressor that makes these small units stand out as superior in the test of racking, constant service. It gives them a distinctive place in the field of small machines, make them the first choice when it comes to the selection of an air compressor to fill a place of responsibility. Not only reliable, but also economical. Efficient design minimizes the power requirement and automatic features keep down the need of attendance. When you need a good, small air compressor investigate the Ingersoll-Rand machines."

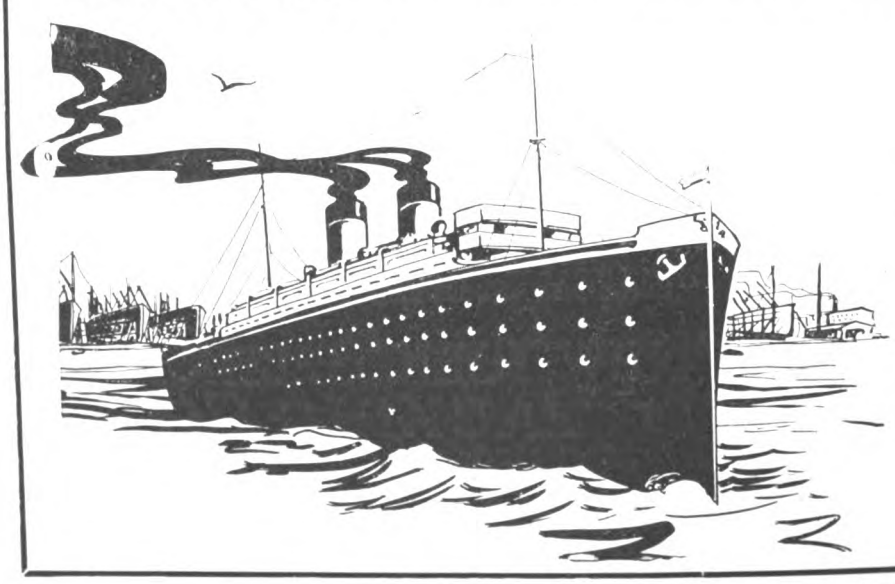
USE

Rostand

Quality of Material and Workmanship, Coupled with Prompt Delivery, keep us in the Front Rank as Manufacturers of



AIR PORTS—FIXED LIGHTS



FOR ALL SIZES & KINDS OF SHIPS & YACHTS

THE ROSTAND Manufacturing Company

MILFORD, CONN.

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

New Jersey Zinc

The world's standard for Zinc products

ZINC PLATES

Our numerous mines yield such a comprehensive variety of zinc ores that we are able to exactly meet every zinc requirement.

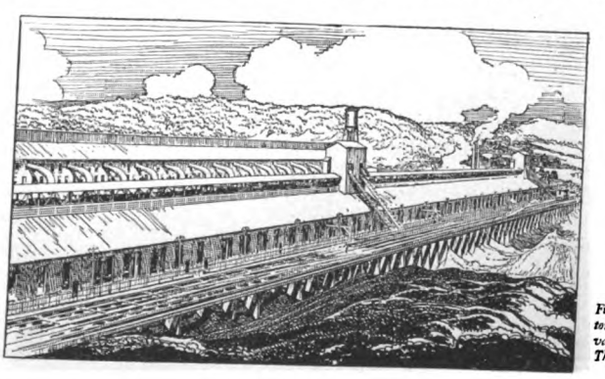
Our rolling mills at Palmerton, Pa., are now prepared to furnish zinc ship plates and boiler plates of any desired dimensions and thicknesses and of just the right quality to best serve their purpose.

This organization with its extensive resources and its seventy years of experience in the development and production of zinc products, has unusual advantages in meeting the needs of the ship building industry.

THE NEW JERSEY ZINC COMPANY, *160 Front Street*, New York

ESTABLISHED 1848

CHICAGO: Mineral Point Zinc Company, 1111 Marquette Building



Furnace building at Palmerton, Pa. A single unit in the vast production equipment of The New Jersey Zinc Company

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

For Sale—Two new 240-horse-power Skandia Pacific oil engines, with air compressor and shafting complete for auxiliary schooner installation. *Wallace R. Foster*, 100 Broadway, New York City.

Wanted—Position as Purchasing Agent; sixteen years' experience—eight years railroad, eight years shipbuilding. New construction and reconstruction work. First-class references. Address *Purchasing Agent*, care of MARINE ENGINEERING.

Marine Engineer and Draftsman, technical graduate with over eleven years' experience in shipbuilding, of which seven years with American yards, desires responsible position here or abroad. Speak Italian and Spanish. Address *Box 7*, care of MARINE ENGINEERING.

Hull Draftsman—Nine years' experience, construction and detail, both naval and merchant vessels, desires position around New York. Present employed. Address *Hull Draftsman*, care of MARINE ENGINEERING.

Position Wanted as Marine Superintendent engineer, representing American shipping interests in Southern British ports. Thoroughly acquainted with places and methods of working. Energetic and trustworthy. Address *Superintendent*, care of Postoffice, Newport News, Va.

Shipbuilder—Open for suitable responsible position; last employed as Superintendent of hull construction; capable man in drafting office. Over 20 years' varied experience, principally on small and light draft river work. Address *Box 779*, care of MARINE ENGINEERING.

Marine Refrigeration—All-around Engineer, Practical and Technical, with many years' experience, marine (and land), with leading British firms, CO_2 and NH_3 systems, and all classes of cargo and provision carrying, who have ORIGINATED CO_2 refrigeration with British firm, desires post with American engineers to commence refrigeration in new shipbuilding. Can carry job through, *i. e.*, estimation, design (on blank sheet, not copy), manufacture, erection, running, etc. Address *Marine Refrigeration*, care of INTERNATIONAL MARINE ENGINEERING, 8 Bouverie street, London, E. C. 4.

Salesman Wanted—A large corporation has an opening for a high-grade oil salesman with a large acquaintance among the maritime trade, shipowners, chief engineers, etc., at the principal North Atlantic ports. Apply by letter, stating qualifications, to *Box 97*, care of MARINE ENGINEERING.

For Sale—One Wheeler Admiralty type Surface Condenser, 1,080 square feet cooling surface, and complete with 12 x 14 x 14 x 14 combined air and circulating pump. Condenser is in good operating condition and being displaced by larger unit. For further particulars address *Texas Star Flour Mills*, Galveston, Tex.

Two Production Engineers, capable and experienced in handling material from mill to hull by economical, efficient system, desire connection in East or South. Highest recommendations from present associates. *Box 8*, care of MARINE ENGINEERING.

Marine Oil Engines—Designer of large marine oil engines of the heavy duty type, decidedly successful with his engines; good organizer, at present department head of large oil engine company, wishes contract with shipyard. Address *Oil Engines*, care of MARINE ENGINEERING.

Marine Manager or Superintendent of Construction. Fifteen years' broad, practical experience, at present holding important Government position in shipbuilding. Will consider worth-while proposition as above or will represent shipyard or manufacturer in New Work. Address *Box 805*, City Hall Station, New York.

Consider this Advertisement if you wish a high-grade man. At age of 14 entered three years' apprenticeship in shipbuilding and attending Evening Technical School during that time; at age of 17 entered woodworking shop as machine hand; cabinetmaker and foreman for three years. Spent one year in Technical School; graduated, received diploma; then one year on mechanical work, another year in Technical College; graduated, received second diploma. Two years as Mechanical Draftsman, three years on designing and production engineering; for past two years on Emergency Fleet work as leading draftsman on joiner work. Continuation of evening schools, keeping in touch with the latest and best books and trade publications, have given me a broad knowledge of modern production methods. A young man of energy, knowledge and ambition, now in his thirty-first year, desires to make permanent connection with shipyard or industrial organization in executive position, preferably combination of steel and woodworking in planning department or on production work. Address *Production*, care of MARINE ENGINEERING.

Foreman Loftsman wanted by a shipyard in the North Atlantic District building steel vessels for the United States Shipping Board. Only an experienced competent man required. In writing, please state fully experience, training, and give reference, together with salary expected, addressing letters to *Box 456*, care of MARINE ENGINEERING.

Sturtevant Steam Engines are described in a special catalogue, No. 230, just published by the B. F. Sturtevant Company, Hyde Park, Mass. "Sturtevant steam engines are now made in two types only—VS-7 and VS-8 (vertical, single cylinder). All others have been eliminated to enable us to meet the demand for these two types. The difference between these two is one of lubrication—VS-7 is forced feed—both systems have their friends. These engines were designed to fulfill the United States Navy specifications, which means that they must have the utmost reliability under all conditions of service. Our engine department was 100 percent engaged in Government work, and we are proud of the fact that our standard engines were accepted without a single alteration. These engines are both used for direct connection to blowers, fans, generators and for independent power service, automatic and throttling."

Small Tools are described in Cleveland Hand Book No. 6, just issued by the Cleveland Punch & Shear Works Company, Cleveland, Ohio. "In each successive step in the manufacture of Cleveland small tools—from the selection of the material until the finished product leaves the workshop—great care is exercised to see that every tool 'measures up' to the same high standard which has during the past twenty-five years made an enviable reputation for Clevelands as the dependable small tools. Cleveland small tools are 'made good to make good'; therefore, when you specify Clevelands you are specifying small tools that are guaranteed to give a maximum of service."

Kitchen's Patent Reversing Rudders are described in an illustrated catalogue published by Mr. Gordon H. Fraser, 747 Royal Liver building, Liverpool. "These reversing rudders give direct and instantaneous control of the ship from the bridge without reference to the engine room. For running long distances at anything less than full speed an engine room telegraph will, of course, still be required, but it will not be necessary to use it for maneuvering purposes in confined waters or in docks and harbors. The increased power to maneuver given by the reversing rudders will enable many ships now dependent on tugs to dispense with their services. For tugs the rudders will be especially useful. It should be noted that the rudders enable a ship to be controlled in a current or a tide race equally as well as in still water. They give a ship steerage way when going slower than the current but in the same direction."

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HULL DRAFTSMEN

Positions open for Grades A and B Draftsmen with knowledge of structural and general arrangement plans, also ordering of material.

THE LAKE TORPEDO BOAT COMPANY
BRIDGEPORT, CONN.

TECHNICAL AND PRACTICAL MEN

Complete organization of Technical and Practical Shipbuilders, steel or wood, with large experience covering all departments. At present employed. Would consider offers from shipyard.

Complete or partial force. A-1 recommendations. Principals only.

Address EXECUTIVES,
Care of MARINE ENGINEERING.

PRACTICAL MARINE ENGINEERING

(SEVENTH EDITION)

By Rear Admiral C. W. DYSON, U. S. N.

This book is devoted exclusively to the practical side of marine engineering and is especially intended for engineers and students and for those who are preparing for examinations for marine engineers' licenses for all grades. It gives complete details regarding marine engines and all that pertains to them, together with much information regarding auxiliary machinery. It covers the general subject of calculations for marine engineers and furnishes assistance in mathematics to those who may require such aid.

PRICE, $6.00

FOR SALE BY MARINE ENGINEERING
6 EAST 39TH STREET, NEW YORK CITY

WANTED

Bound Volumes of

MARINE ENGINEERING

for the years 1912-13-14-15-16-17

Address, giving price asked,

"E. L. S.," care of MARINE ENGINEERING

FOR SALE

Triple Expansion Marine Engine 18" x 32" x 54"—42" stroke, complete with jet condenser. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾" stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

NEW MARINE OIL ENGINES

for sale—6 100 H. P. absolutely new Marine oil engines Fairbanks Morse C. O. semi Diesel engines complete with air and electric starting devices.

For information write

Room 702, Security Building
ST. LOUIS, MO.

The
Shipbuilders' Hand Book

by Harrison S. Taft

Price 15/-

For sale by
BENN BROS., Ltd.
8 Bouverie Street, London, E. C. 4

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Camden Iron Works, Camden, N. J., engineers, iron founders and machinists, has just issued a catalogue describing the following: "Cast iron pipe, flanged pipe, castings up to 130,000 pounds, made and machined; cast iron rams up to 35 feet long. Hydraulic tools for boiler and plate shops, punches, shears, riveters, accumulators, pumps, flanging presses, forging presses, hydraulic cranes, keel benders, plate benders, angle benders, manhole punches. Centrifugal pumps, single and multiple stage, for clear water, drainage, sewage, chemicals; pumps with horizontal shafts and with vertical shafts, non-corrosive impellers; circulating pumps; direct-acting steam pumps for high pressures."

Staybolt Taps are described by the Pratt & Whitney Company, 111 Broadway, New York, in a circular just published. "Like all P & W small tools, Pratt & Whitney staybolt taps are liked for their nice working qualities and their exceptionally long life of service. They're not only good when new, but are heat treated and seasoned to maintain this goodness. Because they cut threads accurately and cleanly with the least expenditure of time and effort, these better taps are favorites in the shop. If you've used them before you know just how good they are. If you haven't, send us your first order—we know you'll be back for more. They're carried in stock in our sales rooms in all large cities as listed here."

Dependable Deck Machinery is described by the American Clay Machinery Company, Bucyrus, Ohio, in a catalogue recently published. "This is a dependable line of deck machinery, especially designed to meet exacting Government requirements and built to pass rigid Government inspection. This line is 'Built Right and Runs Right.' So satisfactory was it in design and construction that the largest sales ever made of this class of equipment were sold for Government ships. Each machine is built in quantities on the interchangeable parts plan, and prompt shipments are possible. The line includes winches, capstans, steering engines, windlasses, etc. We solicit correspondence and will be pleased to refer to users of our line."

The Wager Furnace Bridge Wall is described in Booklet M, just issued by the Wager Furnace Bridge Wall Company, Inc., 149 Broadway, New York. "The Wager furnace bridge wall has proved its value in actual use under all conditions. It has been giving economical service for years without repairs in the fleets of many of the steamship and railroad companies, as well as scores of ships for the United States Government. Equally serviceable for marine or stationary boilers using either hard or soft coal. Send for Booklet M, containing information of vital interest concerning boiler efficiency, together with a list of installations, which is in itself the strongest kind of endorsement of the Wager furnace bridge wall."

The Fire-Gun is described and illustrated in a bulletin published by the Fire-Gun Manufacturing Company, 115 Fourth avenue, New York. "The Fire-Gun puts out little fires before they get to be big ones. Fire-Gun is a new liquid pump which is positively double acting from the first stroke until it is absolutely empty. Never pumps air; never suptters or drips, but shoots a solid stream 30 to 40 feet; will stand roughest usage; never leaks nor fails to operate; Fire-Gun holds 25 percent more fluid than other hand extinguishers, and this extra fluid often saves the day. Fire-Gun fluid is effective where water is useless; it will not deteriorate; it is a non-conductor of electricity; does not freeze at 50 degrees below zero, and will not damage machinery or delicate fabrics."

Vulcan Drop-Forged Chain Pipe Vises are described by J. H. Williams & Company, 63 Richards street, Brooklyn, N, Y., in a booklet just published. "These vises are unbreakable, compact, rapid in action and positive in gripping pipe. They are attachable anywhere—any handy bench, post or other support will serve. They are made entirely of wrought steel, the drop-forged jaws are saw-tempered for file sharpening, and the hand-made chains are of the same superior quality as those of our well-known "Vulcan' and 'Agrippa' chain pipe wrenches. Adjustment is quickly effected by engaging the projecting rivets of the chain with a series of stepped bosses on the base, when the pipe may be instantly locked in an unbreakable grip by a turn of the handle. Vises in three sizes for ⅛- to 8-inch pipe. Remember, Williams' chain pipe tools have been standard for nearly half a century—they are all backed by our absolute and unconditional guarantee of service."

Boyer Pneumatic Hammers are described by the Chicago Pneumatic Tool Company, Fisher building, Chicago, Ill., in Bulletin 124. Little Giant ball-bearing drills are described in Bulletin No. 127, and Chicago pneumatic compressors are described in Bulletins 34-N and 34-M. We quote as follows: "Boyer pneumatic hammers—standard the world over wherever pneumatic hammers are used. Workmen like the 'Boyer' because it helps them to do more and earn more. Boyer hammers are made for riveting, chipping, calking, scaling, etc. Little Giant ball-bearing drills—in work accomplished, economy of air and durability—Little Giant drills have consistently proved themselves the best among portable air drills. Made in a wide variety of styles and capacities, both reversible and non-reversible types. Chicago pneumatic compressors, built for better service—they give it. A complete line, embracing over 300 distinct sizes and types, assures the right compressors for any service requirement. Prompt deliveries are again possible.

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

AMERICAN ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 308 Vine St., Camden, N. J.

THE AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 5921 Walnut St., Philadelphia, Pa.
Vice-President—W. A. Leavitt, Jr., New York Shipbuilding Corporation, Camden, N. J.
Secretary—B. G. Barnes, 1596 North Ave., Bridgeport, Conn.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.

MARINE ENGINEERS' BENEFICIAL ASSOCIATION NATIONAL OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Bienville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

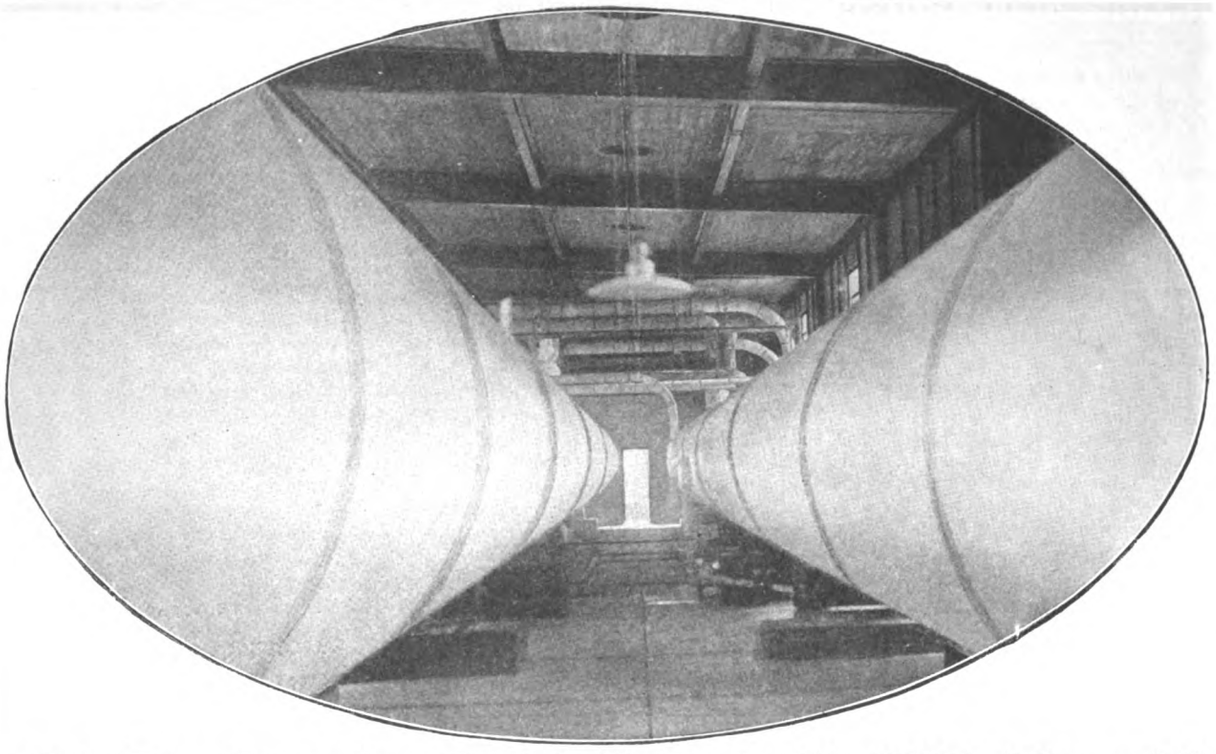
INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle on Tyne.

INSTITUTE OF MARINE ENGINEERS, INCORPORATED
The Minories, Tower Hill, London

Generated on 2024-09-12 08:26 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



This Big Creosoting Plant is Covered with "85% Magnesia"

THE admitted supremacy of "85% Magnesia" for the covering of steam pipes and boilers has led to its adoption for many other fuel-saving purposes. The illustration shows the large pole *creosoting* plant of the L. & N. R. R. Co., at Gautier, Miss.

The tanks are 135 feet long by 7 feet diameter and the poles are pushed on trucks right into the tanks which are then hermetically closed. Steam is forced in to season the wood. This is followed by hot creosote oil.

The treatment lasts for several hours, during which time the necessary temperature is maintained by the "85% Magnesia" coverings, resulting in a large saving of coal over the old way, whereby it was necessary to heat the Creosote continuously during the entire operation.

In addition to the tanks themselves, the steam boilers, pipes, valves, flanges and fittings are all covered with "85% Magnesia."

This is only one of the many fields wherein "85% Magnesia" is daily demonstrating its efficiency as a heat-saver, not only in chemical but in manufacturing plants of all kinds. For covering pipes, stills, receivers and all carriers or containers of heat, *"85% Magnesia" stands alone for maximum heat-saving efficiency, durability, and in actual cash-per-year return on the investment.*

ASK FOR THE PROOFS

For two years the Mellon Institute of Industrial Research has conducted experiments to prove the definite degree of its efficiency under varying conditions of temperature and pressure. A Table of the Monthly Coal Savings in Dollars and Cents by use of "85% Magnesia" has been prepared by this Institute, and the Magnesia Association will mail it to you for the asking. Also the illuminating booklet, "Let '85% Magnesia' Defend Your Steam. If you are an engineer or architect, ask us for the Specification for the scientific application of "85% Magnesia," compiled and endorsed by the above Institute.

MAGNESIA ASSOCIATION *of* AMERICA
Bulletin Building, Philadelphia, Pa.

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D. Crabbs,	The Philip Carey Co.	Cincinnati, Ohio
J. R. Swift,	The Franklin Mfg. Co.	Franklin, Pa.
Alvin M. Ehret,	Ehret Magnesia Mfg. Co.	Valley Forge, Pa.
R. V. Mattison, Jr.,	Keasbey & Mattison Co.	Ambler, Pa.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

The Atlas Soot Blower is the subject of a circular issued by Albert Otto & Sons, Inc., 101 Park avenue, New York. "Many devices have been invented to overcome the soot, but all were lacking in efficiency, due to faults in construction and method of operation until the advent of the Atlas soot blower, which embodies the following points of efficiency: 1, it cleans in the logical direction, viz., with the draught and not against, thereby blowing the soot up the stack and not back on the rear plates; 2, it is operated from the front, always under the eye of the engineer; 3, it reaches every part to be cleaned with dry steam, and does the work thoroughly; 4, there is no obstruction on the smokebox floor, the handle being in position only when the blower is in use; 5, it may be quickly, easily and economically installed, even when boiler is under full pressure; 6, its saving in coal and increase in speed of vessel has proven on official tests to amount to 10 percent and over. An Atlas soot blower is absolutely essential where superheaters are used. Without one the tubes get sooted up immediately and the superheater is practically useless. Thousands of Atlas blowers (under the English trade name) are now doing efficient service in the British Admiralty and mercantile marine, conserving coal, increasing heating surface efficiency and actual speed of ships. Naval authorities pronounce the Atlas the most efficient appliance of its kind yet devised. The British Admiralty is now using it to the exclusion of all other makes, and are taking practically the entire output of the English manufacturers."

The Standard Cutting Torch, Style C. made by the General Welding & Equipment Company, 107 Massachusetts avenue, Boston, Mass., is described in a circular just published. "The construction of a first-class tool should combine two essentials: First, efficient and economical work; second, easiness of repairs and maintenance, so that the operator can do everything himself, making him independent of the manufacturer. Both essentials are covered with our cutting torches. First, they are used by the thousands and by the most prominent concerns, which proves their efficiency; second, all essential parts are easily accessible and exchangeable, and by carrying a few spare parts even a smashed cutter can be fixed up like new in less than one-half hour by your own man. Many concerns standardized on our cutters impressed by their marvelous and simple construction."

Terry Cargo Cranes are described in Bulletin 3, published by Edward F. Terry Manufacturing Company, Grand Central Terminal, New York. "We have a large and varied experience in the design and manufacture of hoists and cranes, and will gladly assist prospective customers in the study of their requirements and in the preparation of plans for wharf development and freight-handling equipment. And we would call attention to a fact frequently overlooked, that in order to obtain complete coordination of cargo-handling operations, together with minimum cost of handling and best use of storage space, it is necessary that the proper type of handling equipment be selected at the very beginning, and that the wharf or pier and its shed should be designed to provide for such equipment."

Castings, Shipfittings, Forgings, made by the American Standard Shipfittings Corporation, 115 Broadway, New York, are described in a bulletin the company has just issued.

The Steam Motor manufactured by the Steam Motors Company, Springfield, Mass., is described in Bulletin No. 5 just issued. "The outstanding feature of the steam motor is that it is not a complete turbine in itself, but when connected to its driven member becomes an integral part of the complete unit, making possible the ideal compact two-bearing unit with any standard design of driven apparatus. There are no new or experimental features introduced in the design, but the arrangement of the machine as a whole is a rational and logical departure from the accepted turbine practice; the effect of which is to eliminate the inherent weaknesses of the three or four bearing design while maintaining all the advantages of the turbine drive."

Prest-O-Lite Service Never Depreciates

More than 40 Plants and Warehouses Ready to Serve you

PREST-O-LITE Service never wears out or grows obsolete and you never can outgrow it.

Of what other manufacturing facility is this true?

Once you subscribe to PREST-O-LITE Service it is yours *for life*—a definite, permanent, transferable right which fits the varying requirements of your business perfectly—as flexible as a sectional bookcase.

Prest-O-Lite

DISSOLVED ACETYLENE

The Universal Gas with the Universal Service

Physically, a self-contained all-purpose unit of ideal form—portable, sturdy, accessible anywhere.

Technically, the one component gas which satisfactorily, simply, and economically performs all heating operations, from the heaviest welding and cutting to the lightest soldering and brazing.

Legally, a clean-cut, life-long obligation which the Company is bound to fulfill. Your rights are transferable any time, to anyone, without notice to us.

Thanks to PREST-O-LITE's part in the war, our subscribers may draw upon a plant and cylinder equipment not equalled for size and quality anywhere in the world.

Better write us about it—there are ample facilities right near you.

THE PREST-O-LITE CO., Inc., General Offices, 30 East 42nd St., New York

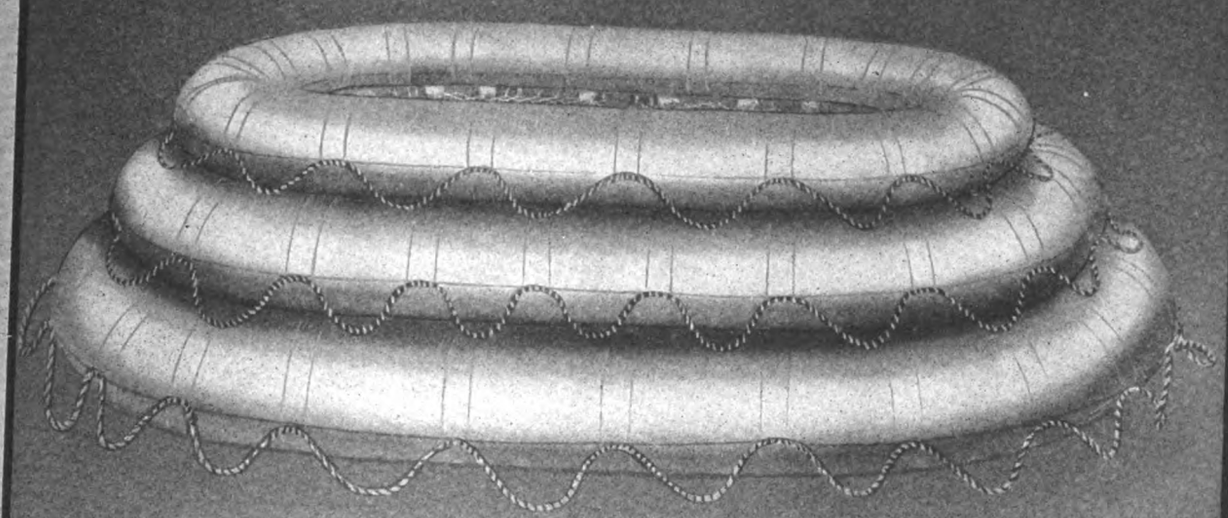
Kohl Building, San Francisco

120

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. **50 E. 42nd Street, New York**

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"The Emergency Rope" is the title of an article published in the May issue of *Plymouth Products*, issued by the Plymouth Cordage Company, North Plymouth, Mass. "A structural iron worker writes: 'In the winter of 1919 I had the contract to erect a girder bridge over the Lehigh Valley Railroad tracks a few miles below Pittston, Pa. The girders weighed over 18 tons each. We rigged up with triple blocks, bought a new 1½-inch manila rope and made ready to erect on a Sunday morning with a gang of eight men, paying each one dollar an hour, or double time. Just imagine how I felt when I saw my new line part without budging one end from the railroad tracks. Of course, all of my work on that day and the day previous went for naught and added a considerable item of expense to the job and put me on the losing end. I bought another 500 feet of 1½-inch manila rope made by the Plymouth Cordage Company, and rigged up again for the following Sunday and erected my job without any further trouble. For some reason the county engineer would not permit me to set the anchor bolts, and as the weather was very cold about that time it caused considerable contraction of the steel. Consequently, when I came on the job one morning I found the bridge had shifted about 1 inch out of center, and was at a loss to get it back, as I had only one jack and very little blocking. I had the floor system all in and bolted up solid, which made the job somewhat heavy to handle, it weighing, complete, about 55 tons. The only thing I could do was to take a chance on picking one end up with the gin pole, which was still in place, so I hooked onto the end floor beam and went ahead with five turns on each of the two niggerheads and jacked it over to center. While the juice fairly ran out of the rope, it held, and I used it for many a day thereafter. Ever since then I have made it a practice to use Plymouth rope, as I found it very unprofitable to erect steel twice for one price.'"

"Monel Metal," which is stated to be a natural combination of nickel and copper, and which can hardly be distinguished from pure nickel in color, is described by the Bayonne Casting Company, Bayonne, N. J., in a 48-page booklet just issued. "It is truly said that industry never creates a demand that the engineer or metallurgist does not meet. Copper and bronze alloys served most purposes satisfactorily so long as they were only required to withstand alkaline or acid solutions. With the growth of industry new conditions have arisen which call for metals possessing unusual qualities. There is a broad field for an alloy which will withstand acids, high temperatures and the erosive action of hot gases and superheated steam. Monel Metal, highly non-corrodible and with the strength of steel, meets these severe requirements. Monel Metal was first made ten years ago, and the demand for it has grown as rapidly as the knowledge of its characteristics could be spread. In the early stages of development, Monel Metal was supplied only for its high tensile strength and relative immunity to corrosion, while at the present time Monel Metal has many diversified uses. It is the endeavor of the Bayonne Casting Company in issuing this pamphlet to direct attention to the physical properties of Monel Metal, the forms in which it is sold and its general uses. It is our further purpose to cooperate in every way with the users of Monel Metal in order to insure its satisfactory application and service. Some of the methods of treatment are not very generally understood, and it is our desire that any consumer wishing technical advice or information will communicate with us."

Seamless Steel Boiler Tubes, arch tubes, superheater flues and pipes are described in a circular published by the Pittsburgh Steel Products Company, Pittsburgh, Pa. According to the circular, "this company's products are made exclusively of the highest quality basic open-hearth steel of special formula, very low in sulphur and phosphorus, and resist corrosion and pitting, are true to size and gage, fit perfectly in the tube sheet and decrease the cost of installation; they have no weld, have greater tensile strength and elastic limit, a greater factor of safety, and increase the efficiency of boiler service. They are the cheapest in the end."

FOR SALE

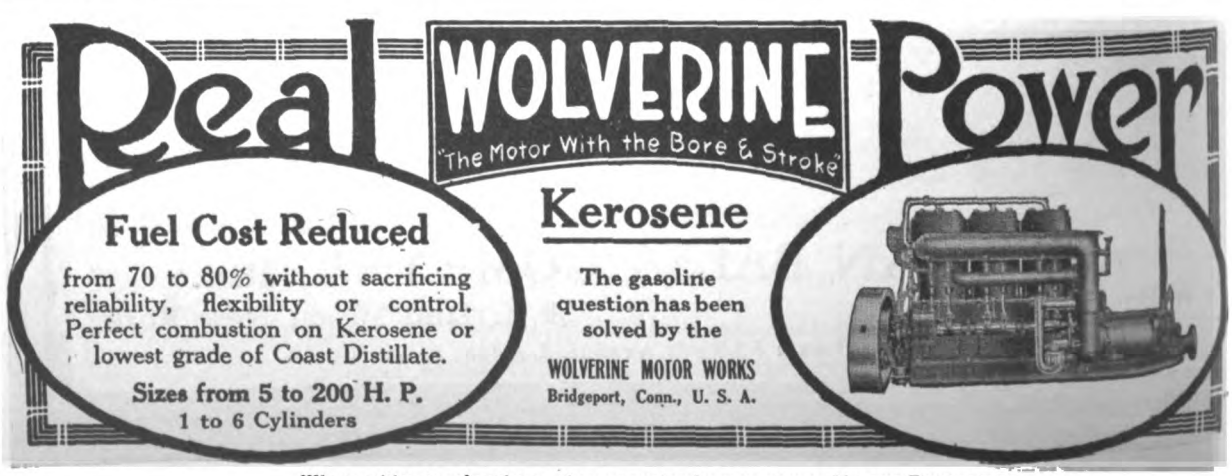
SURPLUS MATERIAL AND EQUIPMENT

All classes of ship construction and Shipyard Plant Construction equipment and material including large quantities of

Wood Working Machinery	Marine Equipment and Accessories	Pumping Machinery
Machine Tools and Fixtures	Air Compressor Equipment	Scrap Metals
Electrical Machinery	Contractors Equipment and Supplies	Lumber
Boiler Shop Equipment	Bridge and Gantry Cranes	Deck Equipment
Forge Shop Equipment	Steel Plates, Shapes and Bars	Galley Equipment

All parties interested in the purchase of any of the foregoing classes of material will receive formal invitations to bid periodically as the material is available if they will promptly request that their names be placed on mailing lists for the items in which they are interested.

SALVAGE—UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION
140 North Broad Street, Philadelphia, Penna.


Real
WOLVERINE
"The Motor With the Bore & Stroke"
Power
Fuel Cost Reduced
from 70 to 80% without sacrificing reliability, flexibility or control. Perfect combustion on Kerosene or lowest grade of Coast Distillate.
Sizes from 5 to 200 H. P.
1 to 6 Cylinders
Kerosene
The gasoline question has been solved by the
WOLVERINE MOTOR WORKS
Bridgeport, Conn., U. S. A.

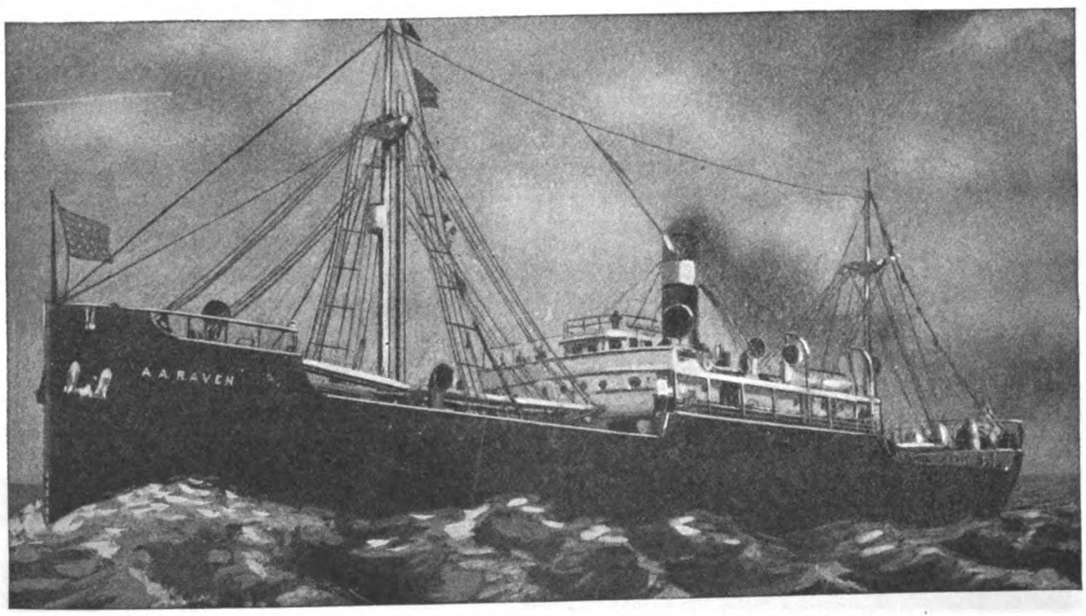
Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ANTONIO C. PESSANO, CHAIRMAN OF BOARD
JOHN R. RUSSEL, PRESIDENT
H. W. HOYT, VICE PRESIDENT & TREASURER
J. A. UBSDELL, VICE PRES. & GEN'L MANAGER
F. G. MORLEY, SECRETARY

Great Lakes Engineering Works

Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Brass Goods and Iron Specialties are described in a profusely illustrated cloth-bound catalogue of 470 pages which has just been published by the Kelly & Jones Company, Greensburg, Pa. This catalogue is an invaluable one, and should be in the hands of all users of brass and iron goods and specialties for steam, gas, water, air and oil. "Having been engaged for many years prior to the beginning of our career as manufacturers in the erection of steam power and heating plants, as well as plumbing and hydraulic work, we acquired a knowledge of the wants of the trade, which has been of inestimable value to us in designing and manufacturing the line of goods which we illustrate in this catalogue. Our extensive factories, which we are enlarging from time to time, as the growth of our trade demands, are located in the center of the great iron- and fuel-producing section of the United States, with superb facilities for shipping goods to all parts of the world, and equipped with the very latest and best automatic machinery, much of which has been designed by us for various special purposes. In every department of our works—from foundries to finishing shops—we employ none but the most skillful workmen, who are directed by capable superintendents in each department. All our work is subjected to the most thorough inspection and test during the process of manufacture and after completion. We are thus fitted for the economical manufacture of goods of a quality unexcelled in the world. To this we attribute the remarkable growth of our business; and it is our highest ambition to continue to deserve the patronage of the trade by not only maintaining the high standard of our work, but, wherever possible, to make improvements; and we will, from time to time, add to our line such articles as may be demanded by the continued development of engineering science."

Modern Gratings for Ships are the subject of Catalogue 2A-10, issued by the Irving Iron Works Company, Long Island City, N. Y. "The modern grating flooring for the modern ship. Apply to Irving subway any measure of merit you will, and you'll find in it everything that is desirable from a standpoint of up-to-date marine efficiency. Is it lightness and strength you seek? Irving subway is the lightest, strongest metallic flooring made—has the largest load capacity per unit of weight and span, and therefore saves on dead loads by needing only lighter supports. Is it a question of safety? Irving subway is fireproof and absolutely non-slipping. Even oil or grease or soap—even snow or ice—cannot destroy its foot-gripping surface. Is ventilation and lighting sought? Irving subway gives 80 percent opening for the passage of light and air—yet the individual openings are so small that only the smallest objects can pass through. Is a comfortable, efficient working surface wanted? Men can push or haul heavy loads over Irving subway without slipping. Wheeled trucks and rib-hooped barrels roll over it easily. And for ladders, there's the Irving safety ladder step—a small panel of Irving subway—light, strong, elastic, non-slipping, non-dirt collecting—the ideal marine ladder step."

Bradley Hammers for shipbuilders are described by C. C. Bradley & Son, Inc., Syracuse, N. Y., in a catalogue just published. "Did you ever stop to think that with a Bradley Hammer, a good man and proper dies you could make all your own punches and chisels right off the bar in your own plant and at the minimum of expense? Surest thing you know. These illustrations were taken from photographs of the actual articles thus made. The smaller punches can be made at the rate of probably 100 per hour and the larger ones at the rate of 80 per hour, and to 0.010 inch perfect at that. More accuracy, less quantity. A 'hammered' punch will beat a turned punch to death. The 'waste' of stock is practically confined to short bar ends, as the excess of metal from one punch goes into the next punch. You will have no 'turnings' for the scrap heap. Just cut off the punches under the hammer, grind cutting edge and temper. Simple, isn't it? Cold chisels, both hand, and for pneumatic hammers made under the Bradley at the rate of 80 per hour. Just cut off, grind cutting edge and temper. Bradley hammers are rarely idle unless you have less work than they can do."

REG'D TRADE MARK

INTERNATIONAL

COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS

In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually

Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING

INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N.Y.

IMPORTANT NOTICE TO SUBSCRIBERS

Our subscribers are requested to notify us immediately whenever they change their address. Otherwise they cannot keep their files unbroken. If subscribers move without notice to us, we cannot duplicate numbers already sent to their old addresses, as many times they are out of print.

MARINE ENGINEERING **6 EAST 39th STREET, NEW YORK**

Wanted: **MACHINING CONTRACTS**

A successful corporation, located in the East, completing Government big gun contracts, has open capacity for general machine work, especially accurate boring up to 15 ft. x 12″ dia.

Can handle marine crankshaft boring and turning; steam winches, compressors, etc.

Well equipped, high grade tool room.

Experts on quantity production requiring high grade, accurate workmanship.

Address Box 500, care of Marine Engineering.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sun Marine Oils

HAVE PROVED THEIR WORTH

QUALITY SERVICE

RELIABILITY EFFICIENCY

Good Ships deserve Good Oils

Let our engineers solve your engine room troubles

SUN COMPANY

1428 So. Penn Square - - - PHILADELPHIA, PA.

STOCKS CARRIED AT

New York City Boston Philadelphia Baltimore Pittsburgh Cincinnati Buffalo St. Louis
Chicago Minneapolis Toledo Newark Newport News Detroit Atlanta New Orleans Sabine

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

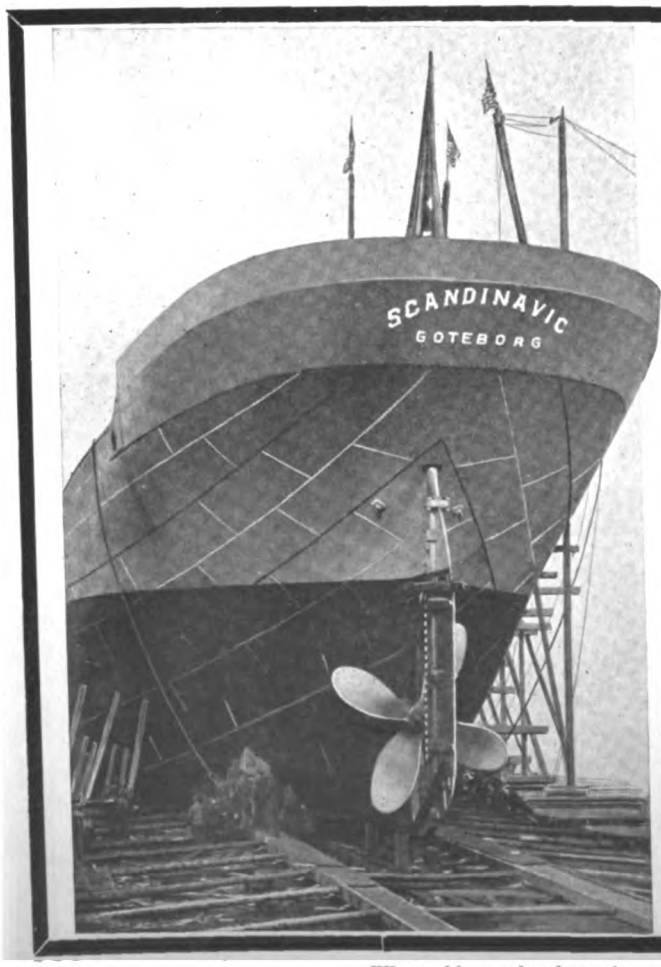
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Armo Iron Rods and Wire for Oxy-Acetylene and Electric Welding" is the title of a 64-page booklet published by the Page Steel & Wire Company, 50 Church street, New York. "Suitable filling material is one of the most important factors in making successful welds. Many failures in welding are directly traceable to the use of material that cannot produce a weld with mechanical properties similar to those of the metal. A skilled operator can correct an improper flame or arc—he can, if necessary, readjust, reshape or reclean the surfaces to be welded, but he cannot alter the composition of filler rods. If the filling material is unsuitable, it cannot be expected to flow evenly or to produce welds that are free from pinholes, soft, hard or brittle spots, etc., even if applied by the best welder. The first essential of welding material is purity; that is, freedom from such foreign matter as sulphur, phosphorus, manganese, silicon, slag and oxides. In the welding of mild steel and wrought iron the mechanical property of elongation is lowered in the line of the weld. It is therefore necessary, in order to increase the holding power of the joint and the elongation of welds in steel or iron, to employ as a welding rod an iron that is even purer and more sound than the metal of the parts to be joined. In the past, experienced and conscientious welders have employed Swedish and Norway iron made with wood charcoal, but since the world war the importation of welding material from the Scandinavian countries has been impossible. Following the example of other industries, the American Rolling Mill Company and the Page Steel & Wire Company undertook the development of suitable American-made welding rods. Together at the furnace, at the microscope, in actual applications and in ways never attempted before, the metallurgists and laboratory specialists of these organizations have developed a welding material that has now demonstrated even better results in toughness, density, homogeneity and freedom from segregated impurities and occluded gases than had previously been obtained from the foreign product."

The Ford Tribloc is described by the Ford Chain Block & Manufacturing Company, Second and Diamond streets, Philadelphia, Pa., in a catalogue just published. "Its strength is surprising. The all-steel working parts mean that you can depend on it, too. It has a safety factor of 3½ to 1 in its weakest part—no greater is found in any hand-chain hoist. And just because those working parts are steel instead of the ordinary cast iron, a Tribloc is not only stronger and safer but also wears longer. The safety is further increased by our patented loop hand-chain guide—which prevents the 'gagging' of the hand chain at any speed or any angle. Nothing that could add to the efficiency or safety of a Tribloc has been overlooked. It's so good we guarantee it for five years."

Williams "Vulcan" drop-forged chain pipe vises are described in a booklet issued by J. H. Williams & Company, 63 Richard street, Brooklyn, N. Y. "These vises are unbreakable, compact, rapid in action and positive in gripping pipe. They are attachable anywhere—any handy bench, post or other support will serve. They are made entirely of wrought steel, the drop-forged jaws are saw-tempered for file sharpening, and the hand-made chains are of the same superior quality as those of our well-known 'Vulcan' chain pipe wrenches. Vises in three sizes for ⅛- to 8-inch pipe. Remember, Williams' chain pipe tools have been standard for nearly half a century—they are all backed by our absolute and unconditional guarantee of service."

Bolinders Oil Engines are described and illustrated by Bolinders Company 30 Church street, New York, in a circular recently published. "Bolinders engines make ideal power plants for oil barges and tankers. Their compactness, light weight, extreme dependability make them by far the most efficient propulsive power for boats of this type. What Bolinders engines have done and are doing for the Standard Oil Company they can do for you. The following Standard Oil Company's boats are Bolinders Equipt: *Starlite, Moonlite, Twilite, Dawnlite, Sunlite, Daylite, La Merced, Oronite, Socony No. 62, Socony No. 5, Socony No. 6.*"



WE HAVE MADE

PROPELLERS

FOR THE FOLLOWING CONCERNS:

American and Cuban S. S. Co.
Baltimore Dry Dock & Shipbuilding Company
Bethlehem Shipbuilding Corporation
Canadian Vickers, Ltd.
Federal Shipbuilding Company
Hog Island Shipyard
Manitowoc Shipbuilding & Dry Dock Company
Newport News Shipbuilding & Dry Dock Co.
New York Shipbuilding Corporation
Norfolk and Washington Steamship Company
Pocahontas Fuel Company
Pusey and Jones Company
Red "D" Line of Steamships
Standard Shipbuilding Corporation
Standard Motor Construction Company
Standard Oil Co. of N. J.

Which Proves

that we can fill your requirements

"WRITE FOR CATALOG"

AMERICAN
MANGANESE BRONZE COMPANY

HOLMESBURG, PHILADELPHIA, U. S. A.

Generated on 2024-09-12 08:18 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"INDESTRUCTIBLE" PNEUMATIC TOOL HOSE

NEW YORK BELTING & PACKING CO. FOUNDED 1846 INCORPORATED 1856

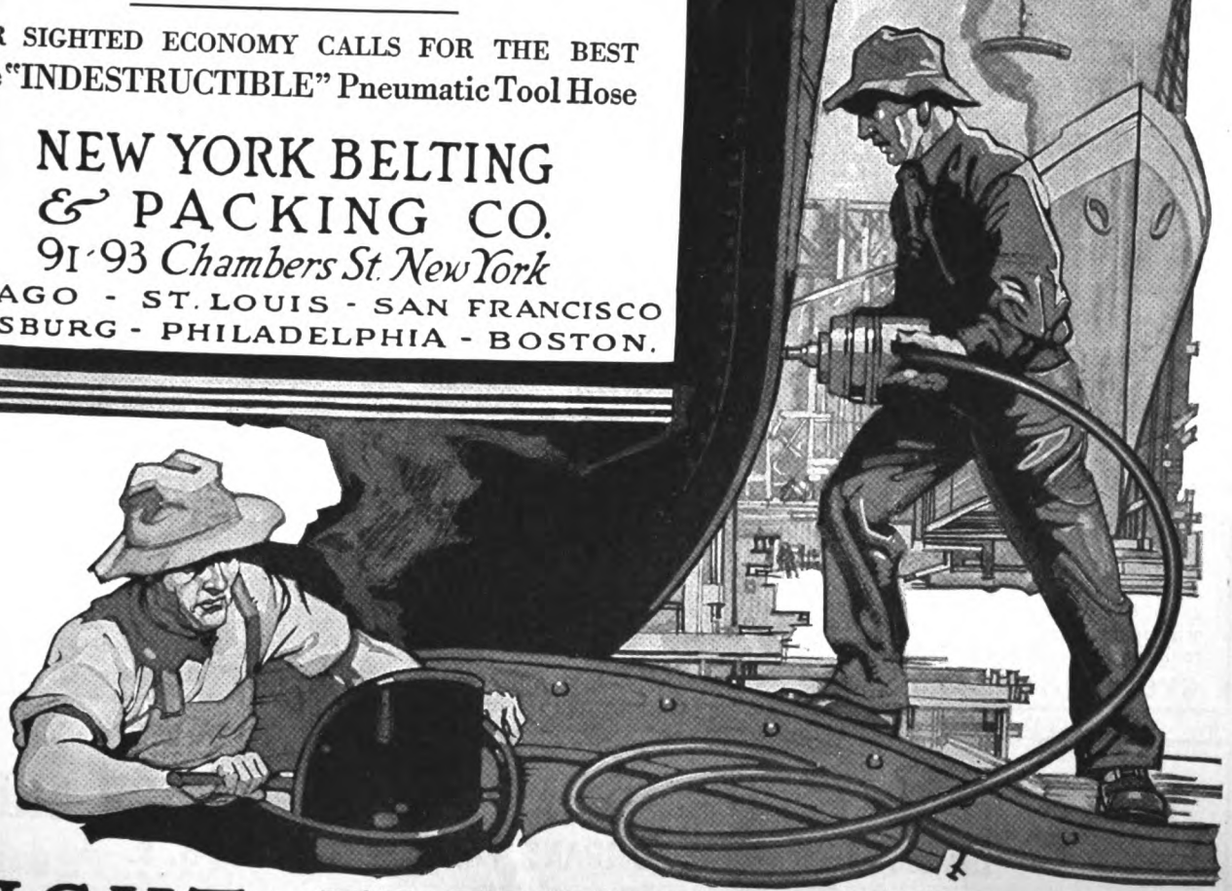
Saves Time, Labor and Air

Whatever performance you demand of tool hose, "INDESTRUCTIBLE" will supply with full measure of satisfaction.

Strength is its inherent quality—will positively not kink—the thick, tough rubber cover stands the constant dragging over rough places. The heavy, seamless rubber tube is proof against injury from oil which is bound to get into your air lines. The braided jacket is a giant in strength.

FAR SIGHTED ECONOMY CALLS FOR THE BEST
Use "INDESTRUCTIBLE" Pneumatic Tool Hose

NEW YORK BELTING & PACKING CO.
91-93 *Chambers St. New York*
CHICAGO - ST. LOUIS - SAN FRANCISCO
PITTSBURG - PHILADELPHIA - BOSTON.



LIGHT - FLEXIBLE - STRONG

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

A Semi-Centennial Souvenir—1868-1918, has just been published by the Yale & Towne Manufacturing Company, 9 East Fortieth street, New York, in the belief that a biography of modern industry will make interesting reading. "Biography constitutes a large part of the world's literature. It is the record of individual lives. History is collective biography—the record of the lives of nations. This booklet outlines the biography of a modern industry. The origins of primeval industries, or man's crude beginnings in the useful arts, have long been the subject of research, study and record. Is it not desirable that record should now be made of the fruition of man's achievements in this field, as illustrated by the origin and growth of modern industrial plants and organizations? In the belief that this question should be answered affirmatively, this brief record has been compiled. The time seems fitting, because it marks the semi-centennial anniversary of the founding of the industry described, and because one of its founders is still available as a source of information."

The Pease Peerless Blue Printing Equipment—"three machines in one"—is described by the C. F. Pease Company, 230 Institute Place, Chicago, Ill., in Catalogue B. "Can be installed in one end of drafting room, constantly under supervision of chief draftsman. Occupies only 5½ by 6½ feet of floor space. No open wash trays; no wet floors; no lines of dripping prints; no waste of sensitized paper; no noisy and unreliable friction discs; all speeds electrically controlled; exposed paper is thoroughly washed, evenly dried, and delivered free from distortion or wrinkles; printer may be used independently from washer and drier if desired. Maximum output, one operator, 100 linear yards per hour, consuming only 7 kilowatts electric energy and 50 cubic feet of gas. Electricity instead of gas may be used for drying if desired."

Dock Cranes installed in a French port by the Brown Hoisting Machinery Company, Cleveland, Ohio, are described and illustrated in Catalogue K, which the company has just published. "If the United States docks were only equipped similar to this shipping would be speeded up. The incoming cargo could be unloaded and the ship receive its export freight in a day or two instead of taking up dock space for a week or more and holding up other vessels. An idle ship is wasted shipping, and requires just that many more ships to carry the goods. It would greatly reduce the number of dock hands, and help remedy this serious problem. It would eliminate practically all the hard work for the men, and this would mean better satisfied workmen. And it would reduce the cost of handling, because the Brown-hoist cranes handle the cargo rapidly and with a less number of men."

Pipe Replacement Costs are treated upon in a circular published by A. M. Byers Company, Pittsburgh, Pa. "In every old established industry the trend is strongly towards Byers genuine wrought iron pipe. The reason is simply that years of experience with pipe failures and replacements have brought home a forceful lesson in the high cost of cheap pipe, and the ultimate low cost of Byers pipe. It is only in the new installations (where this lesson is still absent) that the rust-resistance and economy of Byers pipe is not at once apparent."

Kelly Boiler Fronts are described in Catalogue G, published by the Kelly Foundry & Machine Company, 623 Ninth street, Goshen, Ind. "Design, style and sizes of the Kelly boiler fronts and trimmings have been established for years and conform to the average power plant. Many patterns have accumulated and special work can be furnished on short notice. Pattern and machine shops are well equipped to handle work from blue print or sketch. Complete setting consists of front proper, fitted with flue, fire and ash doors, baffle plates fitted to fire doors, dead plates and liners, rear grate rest and grates, rear arch rest and arch bars, back-stays and diamond washers, soot door and frame, breeching frame and damper. Front accurately fitted and lettered. Styles and sizes ten different regular styles; full arch and half-arch fronts; Dutch oven fronts, smoke extension fronts, full and half-creamery fronts. Made in sizes from 60 inches to 84 inches."

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

STRATFORD SPECIAL NO. 1 MARINE OAKUM
receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. It meets the requirements of all of the United States Government specifications. For years we have guaranteed the quality of each bale to be standard of excellence and returnable at our expense if otherwise. More of this grade Oakum has been used by the United States Government and its contractors than all other makes combined, yet, not a single bale has been condemned or rejected, whereas it has replaced the condemned Oakum of almost every other make. Our experience, quality and service are worth more to you than we ask.
GEORGE STRATFORD OAKUM COMPANY, Jersey City, N. J.

WE ARE SPECIALISTS IN
TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS
IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.
MAKERS OF IRVING'S SUBWAY (TRADE MARK) GRATING THE RETICULATED KIND

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

$4,500,000,000 INVESTED IN SHIPYARDS AND SHIPS

To maintain the American Merchant Marine, built and building, at its present tonnage will cost $150,000,000 per year for new vessels.

To keep in repair this merchant marine will cost $140,000,000 a year to repair and replace machinery, do necessary docking, painting, etc.

Now that American shipyards are permitted to build for foreign account there is little doubt but what many orders will be placed. One millions tons at $160 per ton would represent an expenditure of $160,000,000.

Published circulation statements show:

1—We have more individual paid subscribers among shipbuilding companies and their officials

2—More individual paid subscribers among steamship and steamboat companies and their officials

3—More individual paid subscribers among shipping people all over the world

Than all the other marine publications in the country put together.

MARINE ENGINEERING

6 EAST 39TH STREET NEW YORK

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Chipping as a Fine Art" is one of the subjects treated upon in Bulletin 101, published by the Duntley-Dayton Company, 1416 Michigan avenue, Chicago, Ill. "A casing, a piece of boiler plate or a steel billet, and an ambitious workman with the right kind of chipper in his hands—and watch the chips fly. See how he bends over his work; see how he turns and tilts the hammer to the proper angle; see the pride he takes in his dexterity. Ask him what he most desires in a chipping hammer, and he will say, 'Give me one with power and speed above all things; one with just enough vibration to know that she is hitting; one whose stroke you can regulate from the lightest tap to the hardest blow; one that stands up under the strain of heavy work, and spends its time on the chipping floor rather than in the repair shop.' The Duntley-Dayton chipping hammer meets these specifications, which accounts for its popularity wherever there is much chipping to do. Among the twenty sizes and styles you will find chippers suitable for boiler plate, steel billets or gray iron castings, and for light or heavy work. For riveting, chipping, calking, flue beading, scaling and all other purposes for which pneumatic hammers are used, there is a Duntley-Dayton that will meet the requirements."

Punching and Shearing Machines are described by the Beatty Machine & Manufacturing Company, Hammond, Ind., in a catalogue recently issued. "Our No. 7 single-end punch and shear, with 25-inch throat depth, capacity 1¼-inch hole through 1-inch plate, with architectural jaw with front filler block removed and triple selective gag socket punching tools assembled. These tools are furnished in single, double or triple units. With this equipment three different diameter of punches may be assembled on machine at one setting, permitting a piece of work with three different diameter of holes to be completed in one handling. Especially adapted for boiler shops, steel car and structural works, as they are suitable for flanges, webs, plates and miscellaneous shapes. Built in throat depths from 15 to 72 inches. We also have a complete line of standard patterns in a variety of sizes."

"How to Produce Boiler Efficiency With Minimum Expense" is told in Booklet W, published by the Wager Furnace Bridge Wall Company, Inc., 149 Broadway, New York. "The Wager furnace bridge wall has proved its value in actual use under all conditions. It has been giving economical service for years without repairs in the fleets of many of the steamship and railroad companies, as well as scores of ships for the United States Government. Equally serviceable for marine or stationary boilers, using either hard or soft coal. Send for Booklet 'W,' containing information of vital interest concerning boiler efficiency, together with a list of installations, which is in itself the strongest kind of indorsement of the Wager furnace bridge wall."

Extracts from Smooth-On Instruction Book No. 16 are published in vest-pocket size by the Smooth-On Manufacturing Company, Jersey City, N. J. Smooth-On Iron Cements, Nos. 1 and 2, are described as follows: "Smooth-On Iron Cements Nos. 1 and 2 are chemically prepared iron compounds made and sold in a powder form and used by mixing with water to the consistency of stiff putty. No. 1 is quick hardening. No. 2 is slower hardening and hydraulic. These cements are unequaled for stopping leaks of steam, water, fire or oil, because they become metallic iron that has the same expansion and contraction as iron, thus keeping the joint tight at all temperatures and joints can easily be taken apart."

"What Staybolts Must Do" is told in a circular issued by the American Flexible Bolt Company, 50 Church street, New York. "Staybolts must hold the sheets against pressure. If the sheets never moved relative to each other there would be no staybolt problem and rigid bolts would do. But sheets do move every time the boiler is fired up. Every time the fire-door is open the firebox breathes. The sheets move very slightly, but they move. It is not enough that the bolts should provide for motion of the sheets. They should provide this motion without buckling the fire sheet. This is why American staybolts have a flexible bolt that yields to bending. It is why they add life to firebox sheets."

IN THE DISTRICT COURT OF THE UNITED STATES FOR THE WESTERN DISTRICT OF WASHINGTON, NORTHERN DIVISION

In Admiralty

IN THE MATTER OF THE PETITION of THE CANADIAN PACIFIC RAILWAY COMPANY, a corporation of the Dominion of Canada, owner of the Steamship "PRINCESS SOPHIA," for limitation of liability.

No. 4553

NOTICE OF CALL FOR OFFERS AND BIDS.

NOTICE IS HEREBY GIVEN, That pursuant to an order of court in the above cause made and entered on the 24th day of April, 1919, the undersigned, as trustee, of the wreck of the steamship "PRINCESS SOPHIA" her engines, tackle, apparel, furniture etc., will receive written offers, up to and including June 16th, 1919, for the salving, in whole or in part, of said steamship "PRINCESS SOPHIA", her engines, tackle, apparel, furniture, etc., as they now lie on Vanderbilt Reef, Lynn Canal, Alaska, including her safe delivery at the Port of Seattle and will receive written bids for the sale of said steamship "PRINCESS SOPHIA," her engines, tackle, apparel, furniture, etc., in whole or in part, for cash, All bids must be in writing and addressed to the undersigned at his office No. 742 New York Block, Seattle, Washington. Alternative offers and bids will be received. The Trustee hereby reserves the right to reject any and all offers and any and all bids.

Dated at Seattle, Washington, this 3rd day of May, 1919.

ROBERT A. TRIPPLE
Trustee

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

A Steering Gear Catalogue has just been published by the American Engineering Company, Philadelphia, Pa. This is a fully illustrated 28-page booklet which should be in the hands of every one of our readers interested in this subject. "For more than fifty years the American Engineering Company and its predecessors, the American Ship Windlass Company and Williamson Bros., have been developing a line of marine auxiliary machinery, the chief characteristics of which are reliability, durability and accuracy of operation. The scope of these products does not permit detailed discussion of all the variations which could be made to meet peculiar conditions. Our aim, therefore, is to give concise descriptions and information which will enable customers to determine the general characteristics of the various types of equipment. Special problems should always be the subject of consultation. We shall be pleased to assist at any time in their solution as regards the selection or adaptation of any of our products. To keep pace with the rapid advance of marine auxiliary equipment, our engineering department is constantly studying to better our standard machinery or perfect new types which show improvement over the old. Hence some of the illustrations in this catalogue show designs superior to those in our last edition. On the following pages we briefly describe our standard line of steering gear, a subject of utmost importance to the safety of the ship. Generally speaking, the subject of steering gear is divided into three groups: Hand steerers, transmission systems and power steerers. Each of these groups serves a particular function in connection with steering."

Heavy Duty Oil Engines are described in a bulletin recently issued by the Pittsburgh Filter & Engineering Company, Pittsburgh, Pa. "The Type M. V. heavy duty marine oil engine manufactured by the Pittsburgh Filter & Engineering Company, of Pittsburgh, Pa., embodies the well-established and successful method known in Europe for many years as the Brons principle and in the United States as the Hvid principle. These motors have the economy of the Diesel type without its complication, and their use is particularly recommended where 'engine service' and economy are expected. The motor is entirely independent of any carburetor, hot bulb or plate, spark plug, high-pressure air compressor and storage tanks, fuel pump or spray valve. The compression is carried to approximately 500 pounds per square inch, and the motor is started from cold without preheating and put under full load in a few seconds. These motors will burn any grade of the cheaper fuels, from kerosene to the heaviest of fuel oils, the same fuel serving for starting the motor."

How to flange Corners with the McCabe flanging machine is explained in the booklet "A Solution of Your Flanging Problems," published by the McCabe Manufacturing Company, Lawrence, Mass. "This sturdy machine is simple to operate; requires but small shop space, and is a self-contained unit. The McCabe can be easily moved from job to job, and is ready for operation when connected by a hose to your shop compressed air line. Worth-while savings are soon noticeable, and production is secured by the minimum of effort from your workmen."

Lunkenheimer "Renewo" Valves are described in illustrated booklet No. 535-B S, just published by the Lunkenheimer Company, Cincinnati, Ohio. "Minimum wear and absence of trouble because of the practical and scientific construction of all parts—especially the seat-ring and disc—account for the exceptional service Lunkenheimer 'Renewo' valves give. The parts subjected to the most wear—the seat-ring and disc—are made of a hard nickel alloy, a material having extreme wear-resisting qualities. The disc is provided with the well-known Lunkenheimer 'seat guard,' which materially aids in preserving the seating faces and keeping them clean, and both the seat-ring and disc, and all other wearing parts, are easily renewable, making the valve exceptionally durable. The 'Renewo' is made in globe, angle and cross, with inside screw and with outside screw and yoke; straightway or Y and horizontal and angle check patterns, for 200 and 300 pounds working steam pressure."

Better Lubrication at Less Cost

It is not the first cost of lubricants that counts. It is the work they do and how long they last.

DIXON'S
Graphite
CUP GREASES

are efficient, enduring and economical.

Efficient and **Enduring** because they are made from highest grade greases and Ticonderoga Flake Graphite.

Economical because less grease is used and because of the time and labor saved in frequent greasing.

Wherever you use cup greases about your plant Dixon's can be used with better lubricating results and greater economy.

Tell us your lubricating problem and we will solve it for you. Write for Circular 75-R.

Made in JERSEY CITY, N. J., by the
JOSEPH DIXON CRUCIBLE COMPANY
ESTABLISHED 1827

WANTED

AN INTEREST IN A WELL ESTABLISHED REPAIR YARD OR COMPANY ALLIED TO THE SHIPBUILDING BUSINESS

Now Manager of a large shipyard completing a $14,000,000 contract.

Have associated with me men well known in ship repair work on the Great Lakes and Atlantic Coast.

Wish to deal direct with the controlling interests and would also be interested in any proposition relative to construction work abroad.

Have built three yards in this country and operated two well known plants.

Trust you will appreciate the necessity for strict confidence. Address Box 400, care of Marine Engineering.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

Wanted—MARINE ENGINEERING for 1917. Unbound preferred. Address *Hewitt's Bookstore*, Long Beach, Cal.

Marine Hardware Firm in New York wants as factory representative or distributor line selling to Drydocks and Ship Repair Yards. Address *Business Opportunity*, care of MARINE ENGINEERING.

Wanted—Naval Architect and Marine Engineer, with teaching and practical experience, to take charge of a department in an Eastern University. Applicants please state full experience and salary desired. Address *Eastern*, care of MARINE ENGINEERING.

Wanted—First-Class Ship Draftsmen for shipyard in New York district, building 9,000- to 10,000-ton steamers. Answer in full regarding age, salary, when ready to start, etc., etc. Address *Ship Draftsmen*, care of MARINE ENGINEERING.

New Marine Oil Engines for sale—six 100 horsepower absolutely new marine oil engines, Fairbanks-Morse C. O. semi-Diesel engines, complete with air and electric starting devices. For information write *Inland Navigation Company*, Security building, St. Louis, Mo.

Hull Draftsman—Nine years' experience, construction and detail, both naval and merchant vessels, desires position around New York. Present employed. Address *Hull Draftsman*, care of MARINE ENGINEERING.

Shipbuilder—Open for suitable responsible position; last employed as Superintendent of hull construction; capable man in drafting office. Over 20 years' varied experience, principally on small and light draft river work. Address *Box 779*, care of MARINE ENGINEERING.

For Sale—One Wheeler Admiralty type Surface Condenser, 1,080 square feet cooling surface, and complete with 12 x 14 x 14 x 14 combined air and circulating pump. Condenser is in good operating condition and being displaced by larger unit. For further particulars address *Texas Star Flour Mills*, Galveston, Tex.

Naval Architect and Marine Engineer released from Naval Service desires position. Twenty years' experience, inspections, appraisals, supervision construction, repairs, trial trips specialty. Chief Engineer's license. North Atlantic preferred. Address *Naval Engineer*, Postoffice Box 3624, Boston, Mass.

An Engineering Sales Corporation located in Philadelphia intends to broaden line and will be glad to hear from manufacturers of specialties for railroad, shipbuilding and industrial plants, desirous of establishing exclusive selling agency in this territory. Address *Specialties*, care of MARINE ENGINEERING.

Wanted—Technical Graduates familiar with Marine Engineering specifications, first-class marine engine, electrical and pipe draftsmen. Permanent positions for right men in shipyard near New York City. Address *Graduate*, care of MARINE ENGINEERING.

Superintendent, steel hull construction in medium or small yard; Foreman of loft or Shipfitters in medium or large yard; age 39. Experience from boyhood in charge of mechanics. A past-master of modern loft work. Any shipbuilding firm desirous for a first-class man as mentioned, please address *Box 667*, care of MARINE ENGINEERING.

Engineer, 39, mechanical and marine, with scientific training, B. Sc. (Glasgow) Associate Member, Institution Civil Engineers (London), and years of practical experience in works, also was Lloyd's Surveyor, is open for engagement. Has a perfect knowledge of Russian and German. Address *Box 850*, care of MARINE ENGINEERING.

Consider this Advertisement if you wish a high-grade man. At age of 14 entered three years' apprenticeship in shipbuilding and attending Evening Technical School during that time; at age of 17 entered woodworking shop as machine hand; cabinetmaker and foreman for three years. Spent one year in Technical School; graduated, received diploma; then one year on mechanical work, another year in Technical College; graduated, received second diploma. Two years as Mechanical Draftsman, three years on designing and production engineering; for past two years on Emergency Fleet work as leading draftsman on joiner work. Continuation of evening schools, keeping in touch with the latest and best books and trade publications, have given me a broad knowledge of modern production methods. A young man of energy, knowledge and ambition, now in his thirty-first year, desires to make permanent connection with shipyard or industrial organization in executive position, preferably combination of steel and woodworking in planning department or on production work. Address *Production*, care of MARINE ENGINEERING.

For Sale at a Bargain, six used marine projector searchlights, complete with dispersion lenses and rheostats; 220-volt D. C. Carlisle & Finch Company's make. Form 1-M, plain hand-controlled, 14 inches. Have been in use for one year. Good as new. Make us an offer. *American Rolling Mill Company*, Middletown, Ohio.

Marine Refrigeration—All-around Engineer, Practical and Technical, with many years' experience, marine (and land), with leading British firms, CO_2 and NH_3 systems, and all classes of cargo and provision carrying, who have ORIGINATED CO_2 refrigeration with British firm, desires post with American engineers to commence refrigeration in new shipbuilding. Can carry job through, *i. e.*, estimation, design (on blank sheet, not copy), manufacture, erection, running, etc. Address *Marine Refrigeration*, care of INTERNATIONAL MARINE ENGINEERING, 8 Bouverie street, London, E. C. 4.

Kelly Rocking and Dumping Grates are described in Catalogue "C." published by the Kelly Foundry & Machine Company, Goshen, Ind. "The construction of the Kelly grates offers least resistance to the passage of air, and at the same time supports the fuel; movable for the sifting of ashes and dumping of clinkers and easily operated. Few parts, properly designed, reduces the cost of maintenance to a minimum, and each set is guaranteed to give satisfaction. No special furnace construction is necessary to make installation as grates are supported at front and rear of furnace by regular gate rests. Write for our Grate Catalogue 'C.'"

The General Industrial Catalogue of TYCOS instruments, containing 422 pages of useful and interesting temperature information, is now ready for distribution. This new publication describes the whole line of TYCOS instruments for the indicating, recording and control of temperature. Many special applications are illustrated, showing the manner in which TYCOS instruments can be adapted to diverse temperature needs. Practically every instrument manufactured by the Taylor Instrument Companies, Rochester, N. Y., for industrial purposes is illustrated, and much explanatory matter descriptive of the construction and principles of operation is given. The list includes thermometers of every description, index and recording thermometers, hydrometers, pyrometers, temperature and pressure regulators, barometers, absolute pressure and draft gages. A handsome publication, well bound, printed on paper of excellent quality and illustrated throughout with line drawings and half-tone cuts.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The
Shipbuilders' Hand Book
by Harrison S. Taft
Price 15/-
For sale by
BENN BROS., Ltd.
8 Bouverie Street, London, E. C. 4

WANTED
Bound Volumes of
MARINE ENGINEERING
for the years 1912-13-14-15-16-17
Address, giving price asked,
"E. L. S.," care of MARINE ENGINEERING

PRACTICAL MARINE ENGINEERING
(SEVENTH EDITION)
By Rear Admiral C. W. DYSON, U. S. N.
This book is devoted exclusively to the practical side of marine engineering and is especially intended for engineers and students and for those who are preparing for examinations for marine engineers' licenses for all grades. It gives complete details regarding marine engines and all that pertains to them, together with much information regarding auxiliary machinery. It covers the general subject of calculations for marine engineers and furnishes assistance in mathematics to those who may require such aid.
PRICE, $6.00
FOR SALE BY MARINE ENGINEERING
6 EAST 39TH STREET, NEW YORK CITY

Cumberland Shipbuilding Co.
SHIPBUILDING AND REPAIR PLANT
SOUTH PORTLAND, MAINE
Telephone 6936
Builders and repairers of all types of wooden vessels.
New Marine Railway of 2,500 tons capacity. Inquiries solicited for estimates, costs and dates. Most modern shipbuilding plant on the Atlantic Coast, with every facility for expeditious work. Most accessible harbor on the Coast.

FOR SALE
Triple Expansion Marine Engine 18" x 32" x 54"—42" stroke, complete with jet condenser. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.
Windlass, 8 x 10 of Providence manufacture, suitable for 1¾" stud link chain. Arranged for capstan drive. In first class condition.
Both subject to inspection. Immediate delivery.
McDougall-Duluth Company
Duluth, Minn.

HORNE MANUFACTURING CO.
2 COLLEGE PLACE BROOKLYN, N. Y
Air Ports
Voice Tube and Equipment
Mechanical Ships Telegraph
Water Tight Electrical Fixtures
WRITE FOR CATALOGUE
Southern Branch
Heard Building
Jacksonville, Fla.
Pacific Coast Branch
Grand Trunk Pacific Dock
Seattle, Wash.

OVER
350 VESSELS
(NOW BUILDING)
WILL CARRY
PROPELLERS
DESIGNED BY
THE AMERICAN SCREW PROPELLER CO.
1326-28 CHESTNUT ST., PHILADELPHIA, PA.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Complete Machine Tool Equipment for ship and navy yard use is described in catalogues published by the Niles-Bement-Pond Company, 111 Broadway, New York. "The excellence and stamina of Niles-Bement-Pond machine tools have been amply demonstrated by their record in American ship and navy yards in the two years just past. Built to handle big work in a big way, they have stood up under the trying strain of greatly increased production and have made good without exception. No matter how large the equipment needed, we have ample capacity to turn it out right. We have built bending and straightening rolls up to 36 feet wide, armor plate planers with 14-foot working width, boring and turning mills with 42-foot swing. Niles electric traveling cranes have capacities up to 250 tons and over."

"Wire Specialties for Ships" is the title of an illustrated 8-page catalogue just published by Oliver Whyte Company, Inc., Boston, Mass. "This 'Wire-Talk' is intended for shipbuilders everywhere as a distinct contribution to speeding up their work in so far as it concerns equipment made of wire, light or heavy, no matter what special designs are required. For nearly half a century we have been making to order wire goods of unlimited variety. Long experience and excellent facilities enable us to furnish—and furnish quickly—whatever you need made of wire, especially the various odd-shaped wire goods you find it impossible to get elsewhere. We are also prepared to make to order, for quick delivery, certain articles of sheet steel and light steel shapes. All our work is done by expert wireworkers. Our service experts are at your free disposal, if desired, to co-operate in the preparation of sketches, designs, blueprints, etc., and to offer practical suggestions."

Timed Lubrication for heavy oil marine engines is described and illustrated in a circular issued by the Richardson-Phenix Company, 120 Reservoir avenue, Milwaukee, Wis. "Efficient lubrication of a heavy oil marine engine means its success or failure. It is not efficient lubrication merely to force large quantities of oil into the engine cylinders. When does the oil enter the cylinder? What is the position of the piston? On what portion of the piston is the oil placed? The answers to these questions determine whether your engine is being efficiently lubricated. Lubricating oil should be introduced into the cylinders at each piston stroke, at the time when it will be least affected by the explosion heat, and at the place where it will receive the greatest distribution in the least possible time. Only the Richardson Model 'M' Lubricator can accomplish these results. It is not a ratchet type lubricator; it is different from all other lubricators in principle; it is the only lubricator that accurately times the introduction of the oil into the cylinder."

A Few Uses from the Thousand and One you can find for Smooth-On No. 1 are told in a circular published by the Smooth-On Manufacturing Company, Jersey City, N. J. "If a bolt needs a washer or lock nut, and you wish a permanent job, use Smooth-On No. 1. If you wish to imbed expansion sockets in cement so they will not come out, use Smooth-On No. 1. If you wish a permanent lock nut, fasten the nut to the bolt by applying some Smooth-On No. 1 to the threads."

Water Tube Boilers.—Messrs. J. Samuel White & Co., East Cowes, Isle of Wight, have recently issued a very complete and fully illustrated catalogue describing their boilers, engines and vessels of various kinds. The introduction to the catalogue describing the White-Forster type of water tube boilers gives the following interesting information: We have, since 1885, been makers (and users) of watertube Boilers for various types of vessels, but principally in connection with high-speed vessels, where the conditions of working are severe. The types made by us have been evolved to meet conditions fully and economically, and at the same time to embody the features essential to efficiency and durability, viz. :—1. Simplicity in design and construction. 2. Facility for inspection, cleaning and repair. 3. Ample steam space in proportion to the heating surface. 4. All parts of mild steel. 5. Constructive details based on established boilermakers' practice. In any type of watertube boiler the question of removal and renewal of any or all of the tubes is a very important one—our experience points to the following conditions in the lifetime of a boiler when this is necessary or desirable:—1. During manufacture a tube in the middle of a nest may fail at the last stage of expansion by tube expander. 2. A tube may fail under water pressure test of completed boiler. 3. On inspection of boilers by Receiving Officers after trial, they may discover some point in connection with any one tube and wish it removed. 4. On periodical inspections of conditions of boilers in accordance with instructions for ships in Reserve, or in Commission, a sample tube from each row will reveal the actual condition. 5. Probably the rows next the fire, if the service has been very severe, or the use of the Fire Extinguisher has been injudicious, might require renewal before any other tubes in the boiler. 6. As the result of an accident caused by a burst tube. 7. Complete renewal owing to fair wear and tear. The 'White-Forster' Boiler is designed so that the above conditions can be met with no more difficulty than is experienced in a firetube boiler, and all the necessary repairs can be made by the ship's staff. We have constructed boilers in one unit to supply steam for 100 up to 10,000 S.H.P.—the larger units being oil fired."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

AMERICAN ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 904 Vine St., Camden, N. J.

THE AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 5921 Walnut St., Philadelphia, Pa.
Vice-President—W. A. Leavitt, Jr., New York Shipbuilding Corporation, Camden, N. J.
Secretary—B. G. Barnes, 1596 North Ave., Bridgeport, Conn.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.

MARINE ENGINEERS' BENEFICIAL ASSOCIATION NATIONAL OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Bienville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

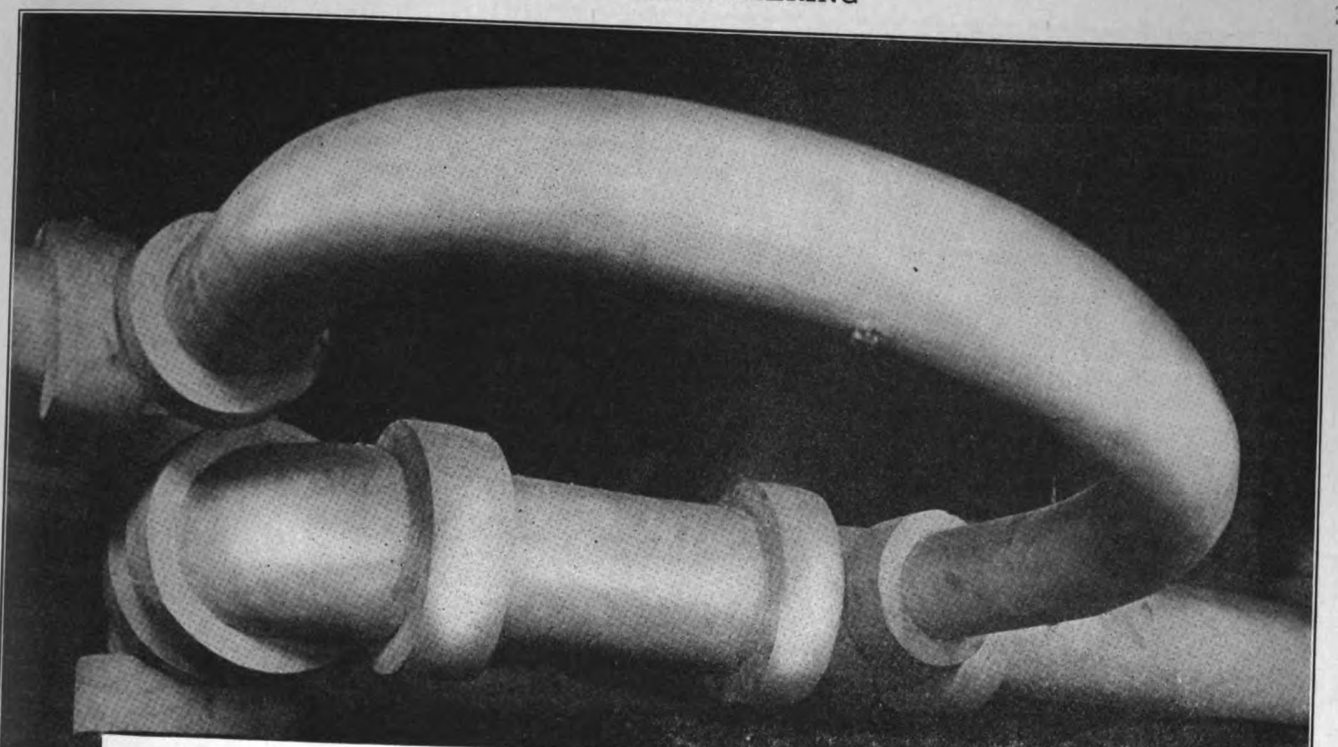
INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

INSTITUTE OF MARINE ENGINEERS INCORPORATED
The Minories, Tower Hill, London.

Generated on 2024-09-12 08:09 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



"85% Magnesia" for *Permanence*—

Although the Calco Chemical Co's plant at Bound Brook, N. J., was built to meet a wartime emergency, it was also planned as a *permanent* unit of America's marvelous new Chemical Industry.

So its designers and engineers chose the most *permanent* as well as the most *efficient* heat insulation—"85% Magnesia" — the world's standard heat and coal saver.

The Coal Bills in a plant such as this are a big item in the cost of manufacture, and their engineers knew that "85% Magnesia" would keep them down to the minimum.

So every piece of equipment—steam pipes, boilers, valves, flanges and fittings—is covered with this master heat insulation; so effectively, that it may be safely said, heat waste is virtually eliminated.

No other material so nearly approaches perfection in its marvelous microscopic air cell structure, in its adaptability to every form of heat container, or in its *permanent* efficiency under all conditions of pressure or temperature, as does "85% Magnesia."

Thousands of industrial plants reduce their fuel bills with this master heat insulation.

Does Yours?

If not, write for the new Table of Actual Monthly Coal Saving in Dollars and Cents, prepared by the Mellon Institute of Industrial Research. To Engineers and Architects we will also send the Specification for the correct application of "85% Magnesia" coverings, compiled by the same institute.

Photo by Permission Ordnance Dept. U. S. A.

Copyright, 1919. M. A. of A. Permission to reprint by application

MAGNESIA ASSOCIATION of AMERICA

721 Bulletin Building Philadelphia, Penna.

Executive Committee, Wm. A. Macan, *Chairman*

George D. Crabbs, The Philip Carey Co. . . . . Cincinnati, Ohio
Alvin M. Ehret, Ehret Magnesia Manufacturing Co., Valley Forge, Penna.
J. R. Swift, The Franklin Manufacturing Co. . Franklin, Penna.
Richard V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Penna.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

BUSINESS NOTES

Under the name of the S K F Industries, Inc., the Hess-Bright Manufacturing Company, the Atlas Ball Company, the Hubbard Machine Company and the S K F Ball Bearing Company will operate after May 1. B. G. Prytz is president of the consolidated company; W. L. Batt, vice-president; J. P. Walsh, comptroller, and S. B. Taylor, sales manager. The principal office of the company will be located at 165 Broadway, New York city.

Raymond F. Brown has been appointed purchasing agent of the Bantam Ball Bearing Company, Bantam, Conn., to succeed C. D. Stoddard, resigned.

The Terry Steam Turbine Company, Terry Square, Hartford, Conn., announces the appointment of R. L. Thomsen as sales manager. Mr. Thomsen was formerly manager of the marine department for the Griscom-Russell Company.

Dean Bros. Steam Pump Works, Indianapolis, Ind., manufacturer of steam pumps, announces the establishment of a New York office at 141 Broadway, in charge of H. Meachem.

The Black & Decker Manufacturing Company, Baltimore, Md., has established a New York office in the Equitable building, Room 2020, in charge of G. R. Lundane, formerly connected with the Thomas B. Jeffery Company and the Findeisen & Kropf Manufacturing Company.

The Steward Davit & Equipment Corporation, 17 Battery Place, New York, announces the appointment of Capt. A. T. Hunter as Pacific Coast agent, with offices in the Sherwood building, San Francisco, Cal.

The Fulflo Pump Company, Blanchester, Ohio, has opened an office at 6253 Ellis avenue, Chicago, Ill., in charge of R. E. Manly, of the Manly Sales Company.

The Joseph Dixon Crucible Company, Jersey City, N. J., announced the removal of its Philadelphia sales office from 1020 Arch street to Rooms 801 and 802 Finance building, South Penn Square, Philadelphia, Pa., on May 1.

Gray & Hunter, Inc., 17 Battery Place, New York, will be the American representative for Dudgeon & Gray, Ltd., 89 Aldgate, London, marine surveyors, consulting engineers and naval architects.

The Emergency Fleet Corporation has opened offices at 615 City Bank building, Mobile, Ala., under the management of G. J. Santa Cruz.

The Chicago Pneumatic Tool Company, Chicago, Ill., announces that it has taken new offices in the Majestic building, Room 1418, Milwaukee, Wis.

The Van Dorn & Dutton Company, Cleveland, Ohio, has opened offices at 1241 First National Bank building, Chicago, Ill., under the management of Harry F. Keegan, and in New York at Room 317, 30 Church street, under the management of John Keegan.

Frederick Morris, 2022 Spruce street, Philadelphia, Pa., has been appointed authorized representative of the United States Shipping Board Emergency Fleet Corporation at the Hog Island shipyard to succeed H. E. Frick.

R. B. Cory Company, Inc., 39-41 Cortlandt street, New York city, announces the election of Charles L. Eidlitz as president.

The McMyler-Interstate Company, manufacturers of car dumpers, locomotive cranes, ore and coal-handling machinery and railroad equipment, Bedford, Ohio, has opened an office in the Hoge building, Seattle, Wash., under the management of W. R. Hendry. This office will cover the States of Washington, Oregon and the northern part of Idaho.

Under the direction of J. C. Sague, the Duntley-Dayton Company has opened a branch office at 411-412 Century building, Cleveland, Ohio. W. M. Hankey has opened a branch office at 826 Home Trust building, Pittsburgh, Pa.

The Henry Engineering Company has opened an office at 71 Bay street, Toronto, Canada. The company, which is composed of Thomas Henry, James A. Rumjay and Edwin B. McBride, will act as consulting engineers on general engineering work.

The Boston offices of the Chicago Pneumatic Tool Company have been re-

The Universal Gas with the Universal Service

Every concern having a production problem involving the joining or sundering of metals, or the maintenance of machinery, will naturally be led to oxy-acetylene because of its greater range of serviceability, its economy and flexibility.

"PREST-O-LITE",—as the convenient portable cylinder with its contents of purest (ready-made) acetylene is called—is the gas without limitations, dissolved chemically so that a large quantity is available in small bulk.

Once your initial supply of cylinders is at hand, you are ready for any kind of flame heating operation—from the lightest soldering or brazing to the heaviest welding and cutting jobs—for the least time and money cost. It is then the business of PREST-O-LITE service to insure your prompt replacements.

The Gas of a Thousand Uses

Prest-O-Lite

DISSOLVED ACETYLENE

Whether the job be on the superstructure of a steel bridge or in a mine or the hold of a vessel, PREST-O-LITE is always ready to be carried to the spot and to deliver its contents efficiently and conveniently.

Thanks to PREST-O-LITE'S part in the war, there are today more plants and more cylinders than ever before—a great ... to every user, present or prospective. like to tell you more about PREST-O- Service and the plan under which our enjoy it.

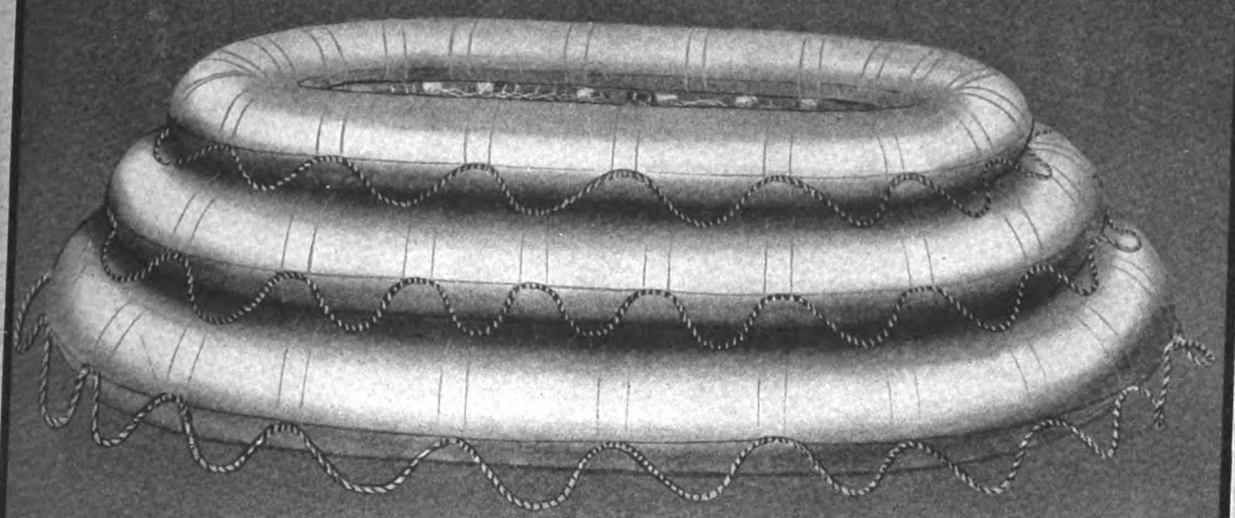
THE PREST-O-LITE CO., Inc., General Offices, 42nd St. Bldg., New York
Kohl Building, San Francisco

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. 50 E. 42nd Street, New York

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

moved to 182 High street, Boston, Mass. F. S. Eggleston is district sales manager. J. I. Edwards has been appointed manager of the rock drill sales division of the company, succeeding E. Eklund, who, as foreign representative, will shortly leave for Europe in the interests of the company. Fred H. Waldron, formerly Minneapolis representative of the Chicago Pneumatic Tool Company, has been appointed manager of the pneumatic tool sales division, with offices in the Fisher building, Cchicago. Nelson B. Gatch succeeds him at Minneapolis, with offices at 301 Metropolitan Bank building. The company also announces the appointment of J. K. Haigh as assistant district sales manager at the San Francisco office, 175 First street, San Francisco, Cal.

The American Concrete Pipe Association, 210 South La Salle street, Chicago, Ill., was reorganized at the recent convention held in Chicago. The association now comprises approximately 400 manufacturers of concrete drain tile and sewer pipe in the United States and Canada. It is planned to include the members of the Pacific Concrete Pipe Association and the Northwest Concrete Pipe Association in the larger unit

Steuart S. Rydehn has been appointed factory superintendent of the Bantam Ball Bearing Company, Bantam, Conn., to succeed Edward H. Cox, resigned.

Frank R. Farnham, formerly sales and advertising counsel of Hollister White & Company, has become vice-president of Rex W. Wadman, Inc., technical advertisers.

The Aberthaw Construction Company, Boston, Mass., announces the establishment of a Philadelphia office at Room 101, West End Trust building, under the management of E. V. Schafer, formerly assistant mechanical engineer of the League Island air craft factory.

A. E. Dorie has resigned as president of the Savage Arms Corporation to become chairman of the board of directors. W. L. Wright succeeds him as president. F. R. Phillips has been elected vice-president, F. R. Pleasanton continues as general works manager, and Arthur F. Hebard becomes general sales manager. F. R. Schafer remains sales manager of the Sharon plant. Brockholst Mathewson will represent the company in Detroit.

Creighton Churchill and Charles L. MacLeod have formed the firm of Churchill & MacLeod, with offices at 512 Fifth avenue, New York city. These men, with assistants, have made analytical studies of operations in over 50 percent of the shipyards in the country under the auspices of the Emergency Fleet Corporation, and are planning to utilize this accumulated knowledge for the benefit of the entire shipbuilding industry in its competition with foreign yards.

The Lunkenheimer Company established new offices at 129 to 135 Lafayette street, New York city, on May 1.

The Hauck Burner Service Station, in charge of H. Harrison Kress, 1711 Sansom street, Philadelphia, Pa., has occupied the entire three-story building at 1718 Sansom street since May 1.

Allan E. Goodhue has been appointed managing director of the English subsidiary of the Chicago Pneumatic Tool Company, known as the Consolidated Pneumatic Tool Company, Ltd., 170 Piccadilly, London, and Fraserburg, Scotland. Mr. Goodhue was previously connected with the Midvale Steel & Ordnance Company before entering the Government service as assistant manager of the steel and raw materials section, production division of the Emergency Fleet Corporation.

The Bailey Meter Company, East Forty-Sixth street and Euclid, Cleveland, Ohio, will move its main office and works from Boston, Mass., to Cleveland, Ohio, on May 1. H. D. Fisher will maintain the Boston office to handle sales and engineering service work in the New England district, also handling inquiries from New York and Philadelphia.

The H. T. Shearer Machine Company, Waynesboro, Pa., has recently opened up its second plant at Waynesboro, in which it will manufacture bridge and boiler reamers exclusively. The company has specially designed machinery for the manufacture of these reamers and expects to raise the capacity to 600 reamers per day within the next sixty days.

FOR SALE

SURPLUS MATERIAL AND EQUIPMENT

All classes of ship construction and Shipyard Plant Construction equipment and material including large quantities of

Wood Working Machinery
Machine Tools and Fixtures
Electrical Machinery
Boiler Shop Equipment
Forge Shop Equipment
Marine Equipment and Accessories
Air Compressor Equipment
Contractors Equipment and Supplies
Bridge and Gantry Cranes
Steel Plates, Shapes and Bars
Pumping Machinery
Scrap Metals
Lumber
Deck Equipment
Galley Equipment

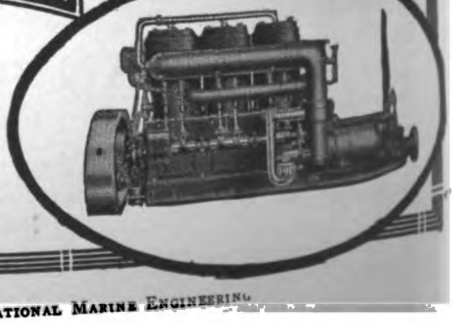
All parties interested in the purchase of any of the foregoing classes of material will receive formal invitations to bid periodically as the material is available if they will promptly request that their names be placed on mailing lists for the items in which they are interested.

SALVAGE—UNITED STATES SHIPPING BOARD EMERGENCY FLEET CORPORATION
140 North Broad Street, Philadelphia, Penna.

Real WOLVERINE Power
"The Motor With the Bore & Stroke"

Fuel Cost Reduced
from 70 to 80% without sacrificing reliability, flexibility or control. Perfect combustion on Kerosene or lowest grade of Coast Distillate.
Sizes from 5 to 200 H. P.
1 to 6 Cylinders

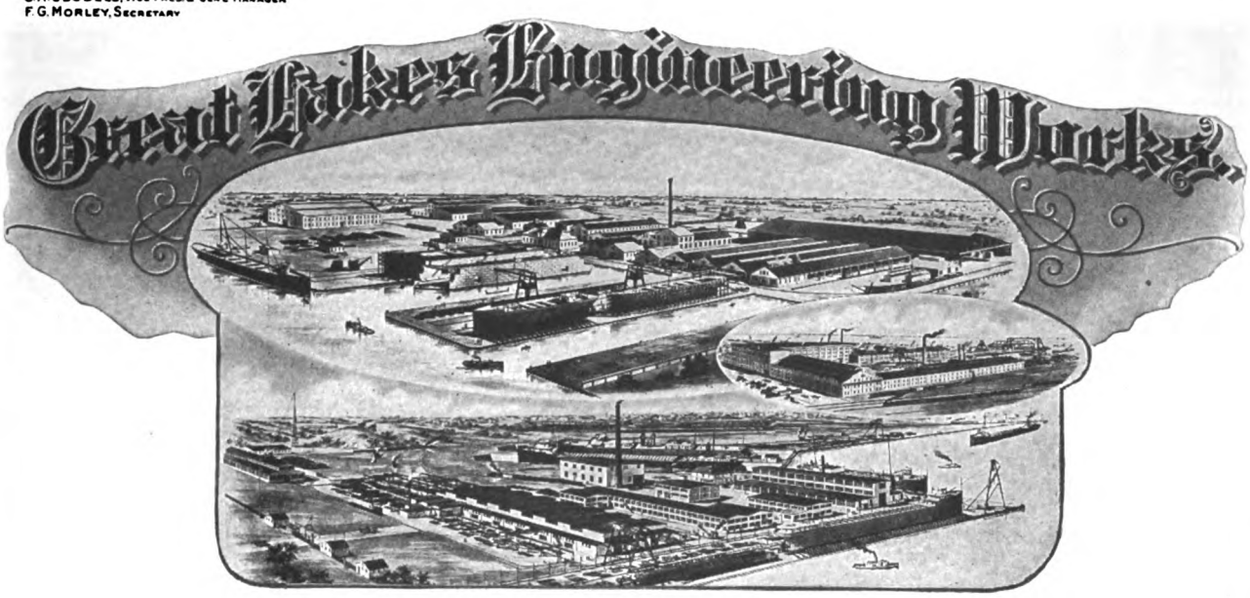
Kerosene
The gasoline question has been solved by the
WOLVERINE MOTOR WORKS
Bridgeport, Conn., U. S. A.



When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING

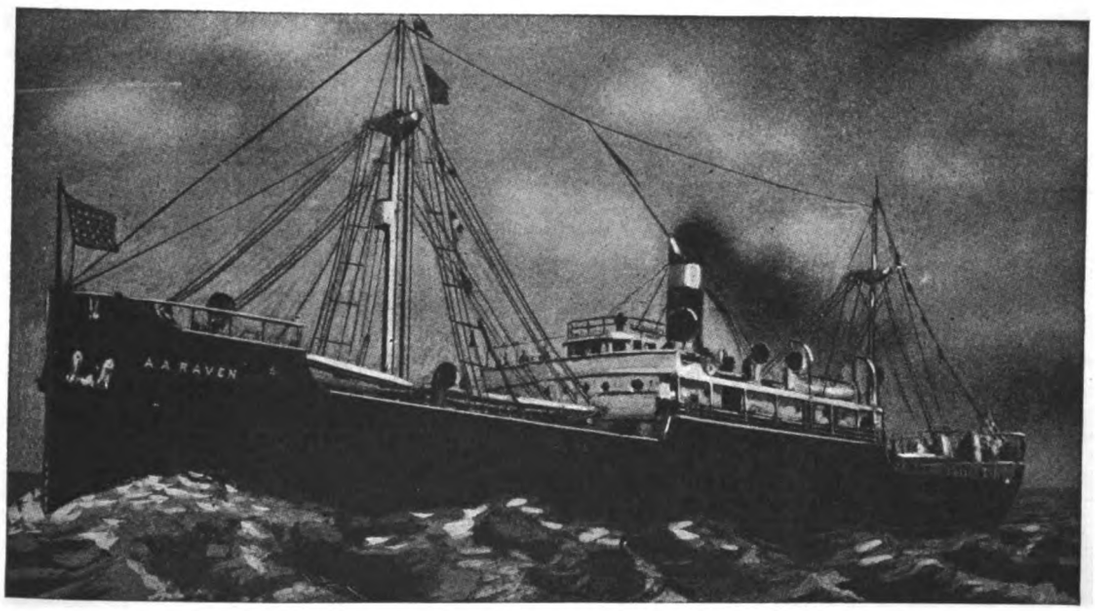
Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ANTONIO C. PESSANO, CHAIRMAN OF BOARD
JOHN R. RUSSEL, PRESIDENT
H. W. HOYT, VICE PRESIDENT & TREASURER
J. A. UBSDELL, VICE PRES. & GEN'L MANAGER
F. G. MORLEY, SECRETARY



Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Emergency Fleet Corporation Establishes Plant Disposal Section

Before retiring as director-general of the Emergency Fleet Corporation, Chas. Piez created a new department, known as the Plant Disposal Section, which will be in charge of B. E. Grant, engineer of the shipyards plant division.

This new division will handle the difficult economic problem of disposing of the Emergency Fleet Corporation interests in wood, concrete and steel shipyards, and also in fabricating plants totaling several hundred millions of dollars. The plan is to put these shipbuilding units which are capable of such disposal into private hands as going concerns, so that the enterprises may be continued on an economic basis. Every means will be taken to prevent all possible wastage of money and materials.

The most difficult problem will be the disposal of the very large yards—Hog Island, the Merchant Shipbuilding Corporation, Bistol, Pa., and the large plant of the Submarine Boat Corporation, Newark, N. J. In these cases it will probably be necessary to adapt the facilities of the plant to other types of work, as during peace times shipyards of such gigantic proportions could probably not be operated profitably.

Shipping Developments

Alaska Territorial House of Representatives has passed a bill appropriating $300,000 to provide funds for the entering of the Territory of Alaska into transportation business through the chartering of ships from the United States Shipping Board, and to petition Congress for a $5,000,000 bond issue to further the project. The bill makes the Governor, in this case Governor Riggs, secretary and treasurer of the proposed Alaska Shipping Board.

Willamette Plant Establishes Record

Outfitting 24 steel steamers of the 8,800-ton design in twenty-one months will be the record of the Willamette Shipbuilding Company, Portland, Ore., when the *West Nohno* has been delivered. During the week of April 19, six Scotch marine boilers were shipped to Puget Sound yards, three to the Ames shipyards, and the same number to the Todd Dry Dock & Construction Corporation. Six others were shipped to J. F. Duthie & Company, Seattle, Wash., on April 20.

Canada to Enter West Indian Export Field

Business men in England are looking for Canada to become an important factor in British West Indies trade, which is now held largely by United States exporters. The favorable export balance of the United States, it is stated, has been gained principally because of lack of shipping from Great Britain and on account of the necessary concentration on war production.

Portland Drydock Will Cost $1,000,000

According to the latest estimate by G. B. Hegardt, engineer and secretary of the Commission of Public Docks, Portland, Ore., the new drydock which the city proposes to construct will cost slightly less than $1,000,000, including ship repair facilities, but not including the site; the drydock will be of the floating type.

The port authorities at Portland, Ore., are considering the building of storage tanks to accommodate 16,000 barrels of vegetable oil. Engineer Hegardt has recommended that bids be called for on two tanks of 1,000 barrels each, two tanks of 2,000 barrels each, and two tanks of 5,000 barrels each. At a rough estimate it has been computed that the boilers, piping and full equipment for this construction would cost about $48,000. The engineer has also submitted a report concerning the construction of a single-story warehouse to cost between $92,000 and $99,000, depending upon the construction used.

Max A. Houser, president of the Port of Portland Commission, has requested that the Portland Chamber of Commerce give its support for the appropriation of $10,000,000. This fund will not be used in actual harbor construction, but to establish traffic bureaus and other organization committees which will make the investment in actual harbor facilities profitable.

INTERNATIONAL
COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS
In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually
Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING
INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N.Y.

IMPORTANT NOTICE TO SUBSCRIBERS
Our subscribers are requested to notify us immediately whenever they change their address. Otherwise they cannot keep their files unbroken. If subscribers move without notice to us, we cannot duplicate numbers already sent to their old addresses, as many times they are out of print.
MARINE ENGINEERING 6 EAST 39th STREET, NEW YORK

GENERAL WELDING & EQUIPMENT CO.
G W & E C O
107 MASS. AVE. BOSTON, MASS.

WELDING & CUTTING EQUIPMENTS.
HIGH QUALITY AND EFFICIENCY, LOW COST OF OPERATION AND MAINTENANCE. OPEN MODERN CONSTRUCTION. ACCESSIBILITY AND EXCHANGEABILITY OF EVERY ESSENTIAL PART AND THE CONSIDERATE SERVICE WE FOLLOW UP WITH—HAVE BUILT UP A REMARKABLE TRADE WITH THE MOST PROMINENT CONCERNS.
WRITE FOR OUR LATEST CATALOGUE ABOUT REGULATORS, CUTTING AND WELDING TORCHES.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sun Marine Oils

HAVE PROVED THEIR WORTH

QUALITY SERVICE

RELIABILITY EFFICIENCY

Good Ships deserve Good Oils

Let our engineers solve your engine room troubles

SUN COMPANY

1428 So. Penn Square - - - PHILADELPHIA, PA.

STOCKS CARRIED AT

New York City Boston Philadelphia Baltimore Pittsburgh Cincinnati Buffalo St. Louis
Chicago Minneapolis Toledo Newark Newport News Detroit Atlanta New Orleans Sabine

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Varying Tonnage on the Warrior Barge Canal

W. D. Nesbitt, chairman of the Alabama Board of Economy and Control, has pointed out that in addition to the coal-handling possibilities, the Warrior River should make Mobile the seaport for Birmingham, Selma, Montgomery and other large inland cities through the handling of cotton, steel and other inland products by this route. The barge equipment is satisfactory for this greater development. The building, however, of the added terminal facilities and cargo-handling machinery would be necessary to make the scheme financially profitable.

American Steel Market in England

The recent cut of $4.25 in American prices for pig iron and of $12.00 on finished steel is causing considerable anxiety to steel manufacturers in England. British manufacturers see their overseas trade threatened, and even their domestic markets prejudiced, by discrepancy in prices in favor of the United States. A further cut, it is reported, might make it possible to bring American steel, freight and all, into the British market at less than the British price. The city of Birmingham, England, for instance, has placed a large order for street car rails with an American concern. Price and guarantee of delivery secured the contract for the American bidder.

TRADE PUBLICATIONS

Lovekin Pipe Joints are described by the Lovekin Pipe Expanding & Flanging Machine Company, Philadelphia, Pa., in a catalogue just issued. "These joints withstand all pressures of steam, air, gas and hydraulic—far beyond the point where the pipe itself will burst. They are in reality mechanically produced hand-peened joints with important improvements. The most economical in maintenance, and the only practical joints insuring absolute tightness. As all navy yards and most shipbuilding plants use them, won't you consider our method now?"

Pneumatic Tool Hose is described in an illustrated circular issued by the the New York Belting & Packing Company, 91 Chambers street, New York. "Whatever performance you demand of tool hose, 'Indestructible' will supply with full measure of satisfaction. Strength is its inherent quality—will positively not kink—the thick, tough rubber cover stands the constant dragging over rough places. The heavy, seamless rubber tube is proof against injury from oil which is bound to get into your air lines. The braided jacket is a giant in strength."

The Midwest-Diesel Oil Engine is described in a bulletin issued by the Midwest Engine Company, Indianapolis, Ind. "Here is the Midwest-Diesel directly reversible marine oil engine—a brute for strength and a wizard for economy and efficiency. Among its distinctive features is the open crank case, that affords the utmost convenience for inspection and adjustment. Pistons, with their rings, are removable without dismounting the cylinder heads or connecting rods. Simple, positive control for maneuvering ahead and astern guarantees extreme flexibility of operation."

Shepard Hoists are described and illustrated in circulars published by the Shepard Electric Crane & Hoist Company, 328 Schuyler avenue, Montour Falls, N. Y. "Where you find Shepard hoists there you find work is carried on with the highest degree of efficiency, for each 'Shepard' represents a saving in time and labor—one man can operate a 'Shepard' and handle a piece it would take a gang to lift, and in half the time. Give a 'Shepard' consistent, steady, 'day-in-day-out' work—it's sturdy and built for that kind of service. It's unaffected by dirt, dust or dampness—because all electrical and mechanical parts are protected by the 'closed-in' unit construction. The Shepard line includes traveling cranes, monorail cranes and hoists with either plain or motor-operated trolleys, ½ to 30 tons. Our engineers will be glad to serve you."

WE HAVE MADE

PROPELLERS

FOR THE FOLLOWING CONCERNS:

American and Cuban S. S. Co.
Baltimore Dry Dock & Shipbuilding Company
Bethlehem Shipbuilding Corporation
Canadian Vickers, Ltd.
Federal Shipbuilding Company
Hog Island Shipyard
Manitowoc Shipbuilding & Dry Dock Company
Newport News Shipbuilding & Dry Dock Co.
New York Shipbuilding Corporation
Norfolk and Washington Steamship Company
Pocahontas Fuel Company
Pusey and Jones Company
Red "D" Line of Steamships
Standard Shipbuilding Corporation
Standard Motor Construction Company
Standard Oil Co. of N. J.

Which Proves

that we can fill your requirements

"WRITE FOR CATALOG"

AMERICAN MANGANESE BRONZE COMPANY

HOLMESBURG, PHILADELPHIA, U. S. A.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

NEW YORK BELTING & PACKING CO.
FOUNDED 1846 INCORPORATED 1856

DRAW UP THE BOLTS OF A JOINT—

and you'll want a packing there that will meet a host of needs—each one essential.

Seventy odd years of experience and experiment is the basis on which we have produced

FIRO SUPERHEAT SHEET PACKING

Where temperatures and pressures are high, it has no equal.

FIRO will not char or harden in a joint, never flattens out between the flanges when you draw up the bolts and it is positively non-absorbent. Its permanency insures both plant economy and safety of your men.

Carried in stock in 1-32″, 1-16″, 1-8″ thicknesses. Sheets measure 40″ x 40″.

NEW YORK BELTING & PACKING CO.
MECHANICAL RUBBER GOODS
NEW YORK
CHICAGO ST. LOUIS SAN FRANCISCO
PITTSBURGH PHILADELPHIA BOSTON

WRITE FOR SAMPLE

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"The Test of Adaptability" is the title of a circular published by the Graton & Knight Manufacturing Company, Worcester, Mass. "For some materials there is no substitute. Such, for instance, is leather for belting. Its superiority for all the major requirements is recognized by transmission experts. The belt shown above, for instance, was transferred from one drive to another—lengthened by splicing and cut cut down 2 inches in width—an adaptation that is possible only with leather. The advantages of leather for transmission are developed to their maximum in Graton & Knight standardized series leather belts. They are that rare thing in business—a highest-quality line enjoying the largest sales. Do you know of any other brand in any highly competitive field that combines highest grade with biggest sale? Talk that over in your transmission conferences."

Wetmore Expanding Reamers are the subject of Bulletin No. 11, recently published by the Wetmore Reamer Company, Milwaukee, Wis. This publication includes illustrations, descriptions, dimensions and prices of Wetmore reamers, their parts, arbors, blades, etc. "Attention is called to the free cutting, accurate and extremely smooth reaming of these adjustable tools, and to the ease of making adjustments without the use of shims, screw drivers, calipers, micrometers or other tools. The particular feature, as noted by the principal illustration, is the left-hand spiral angle at which the blades are set. Among others listed are the solid reamer body, the graduated screw for expanding to thousandth of an inch, and the fact that these reamers may be attached to various styles and lengths of arbors. Standard size of reamers now made and vary from 1 inch diameter to 4½ inches."

"What Use is a Ship in a Dry Dock?" is the question asked in one of the bulletins published by the Ingersoll-Rand Company, 11 Broadway, New York. The bulletin goes on to state: "Its earning power has temporarily ceased, the work being done on it costs heavily, and the overhead charges—wages of crew, interest on investment, and all the rest—keep piling up. It's just the same with air tools. Excessive breakage and difficulty in repairing the tools necessitate a more extensive equipment and creates greater overhead costs. 'Little David' tools are made to reduce those expenses. They are so strong that the amount of repairs needed is extremely low. They are so simple in design that the time it takes to repair them is very short, and due to the interchangeability of various parts only a few spare parts need to be kept in stock. If you want pneumatic tools that stay on the job and keep out of the tool 'drydock,' equip your yard with 'Little David' pneumatic tools."

The Bolinders Oil Engine is the subject of a bulletin issued by Bolinders Company, 30 Church street, New York. "Bolinders engines make ideal power plants for oil barges and tankers. Their compactness, light weight, extreme dependability make them by far the most efficient propulsive power for boats of this type. What Bolinders engines have done and are doing for the Standard Oil Company they can do for you. The following Standard Oil Company's boats are Bolinders equipped: *Starlite, Moonlite, Twilite, Dawnlite, Sunlite, Daylite, La Merced, Oronite, Socony No. 62, Socony No. 5, Socony No. 6.*"

Buffalo Fans, Blowers and Exhausters are described in Section No. 400 of the catalogue published by the Buffalo Forge Company, Buffalo, N. Y. "The design and structural details of Buffalo fans, blowers and exhausters are the result of practical knowledge gained by years of experience in the successful building and installing of this type of equipment for all purposes. The greatly increased use of fans in manufacturing and chemical plants for a great variety of purposes, together with the demand for better efficiency, has led to the development of new types and the improvement of others; in the progress of fan engineering we have occupied a prominent position, and in this and other catalogues we include information of much value to fan users."

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

STRATFORD SPECIAL NO. 1 MARINE OAKUM
receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. It meets the requirements of all of the United States Government specifications. For years we have guaranteed the quality of each bale to be standard of excellence and returnable at our expense if otherwise. More of this grade Oakum has been used by the United States Government and its contractors than all other makes combined, yet, not a single bale has been condemned or rejected, whereas it has replaced the condemned Oakum of almost every other make. Our experience, quality and service are worth more to you than we ask.
GEORGE STRATFORD OAKUM COMPANY, Jersey City, N. J.

WE ARE SPECIALISTS IN
TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS
IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.
MAKERS OF IRVING'S SUBWAY (TRADE MARK) GRATING THE RETICULATED KIND

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

New Jersey Zinc

The world's standard for Zinc products

ZINC PLATES

Our numerous mines yield such a comprehensive variety of zinc ores that we are able to exactly meet every zinc requirement.

Our rolling mills at Palmerton, Pa., are now prepared to furnish zinc ship plates and boiler plates of any desired dimensions and thicknesses and of just the right quality to best serve their purpose.

This organization with its extensive resources and its seventy years of experience in the development and production of zinc products, has unusual advantages in meeting the needs of the ship building industry.

THE NEW JERSEY ZINC COMPANY, *160 Front Street*, New York

ESTABLISHED 1848

CHICAGO: Mineral Point Zinc Company, 1111 Marquette Building

PITTSBURGH: The New Jersey Zinc Co. (of Pa.), 1439 Oliver Building

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:20 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sootless Boiler Tubes are treated upon in a bulletin issued by Albert T. Otto & Sons, Inc., 101 Park avenue, New York. "Many devices have been invented to overcome the soot, but all were lacking in efficiency, due to faults in construction and method of operation, until the advent of the Atlas Soot Blower, which embodies the following points of efficiency: It cleans in the logical direction, viz.: with the draft and not against, thereby blowing the soot up the stack and not back on the rear plates; it is operated from the front, always under the eye of the engineer; it reaches every part to be cleaned with dry steam, and does the work thoroughly; there is no obstruction on the smokebox door, the handle being in position only when the blower is in use; it may be quickly, easily and economically installed, even when boiler is under full pressure; there is no decrease of pressure in using, as the entire operation only consumes about two minutes, and the results are almost instantaneous; when not in use it is telescoped into the tube (which is sealed) out of contact with the extreme heat; its saving in coal, and increase in speed of vessel, has proven on official tests to amount to 10 percent and over. An Atlas Soot Blower is absolutely essential where superheaters are used. Without one the tubes get sooted up immediately and the superheater is practically useless. Thousands of Atlas Blowers (under the English trade name) are now doing efficient service in the British Admiralty and Mercantile Marine, conserving coal, increasing heating surface efficiency and actual speed of ships. Naval authorities pronounce the Atlas the most efficient appliance of its kind yet devised. The British Admiralty is now using it to the exclusion of all other makes, and are taking practically the entire output of the English manufacturers."

Reversing Motor Planers are described in an illustrated bulletin issued by the Niles-Bement-Pond Company, 111 Broadway, New York. "The reversing motor drive as originally developed by us and which can be supplied on all Niles-Bement-Pond planers is a production booster on planer work that is reducing costs wherever in use. With drive direct from motor to table, extreme accuracy of stroke is assured. There is no over-travel. When motor stops, table stops. Motor is especially designed for quick reversal, and acts as a dynamic brake to stop table instantly and positively. We build machinery for ship shed equipment, all machines for the heaviest class of marine boilers, complete equipments for marine engine and steam turbine manufacture. These include steam hammers and electrical traveling cranes up to the largest capacity, as well as special machine tools for handling armor plate, guns and gun mounts. Extensive installations in Governmental and private shipyards and drydocks throughout the country speak for the quality and recognized merit of our products. We'll gladly send catalogues or give you any information or assistance in selecting equipment you desire."

Bradley Hammers for shipbuilders are described in a number of bulletins published by C. C. Bradley & Son, Inc., Syracuse, N. Y. "Did you ever stop to think that with a Bradley hammer a good man and proper dies you could make all your own punches and chisels right off the bar in your own plant and at the minimum of expense? Surest thing you know. These illustrations were taken from photographs of the actual articles thus made. The smaller punches can be made at the rate of probably 100 per hour, and the larger ones at the rate of 80 per hour and to 0.010 inch perfect at that. More accuracy, less quantity. 'A hammered' punch will beat a turned punch to death. The 'waste' of stock is practically confined to short bar ends, as the excess of metal from one punch goes into the next punch. You will have no 'turnings' for the scrap heap. Just cut off the punches under the hammer, grind cutting edge and temper. Simple, isn't it? Cold chisels, both hand, and for pneumatic hammers, made under the Bradley at the rate of 80 per hour. Just cut off, grind cutting edge and temper. Bradley hammers are rarely idle unless you have less work than they can do. Our more than forty-five years' experience in making hammers at your service.

ADMIRAL JELLICOE WAS WORRIED ABOUT HIS CONDENSER TUBES

He seemed to be more anxious over his condensers than over his 11-inch guns. The condenser tubes in many of his ships were in bad condition.

The regular commercial brand of tubing is NOT good enough for condensers. Special painstaking care must be exercised in manufacturing this product to do it RIGHT.

A few years ago we couldn't get the high quality condenser tubing we wanted, so we built a large mill and are now making our own. Wheeler Crescent Brand tubes are drawn and heat treated by EXPERTS IN CONDENSER WORK.

It will pay you to specify CRESCENT BRAND or order direct from our mill.

NO ORDER TOO LARGE OR TOO SMALL

During one month of this year we made and shipped nearly 1,000,000 pounds of condenser tubing—A RECORD.

Shall we put you on our tube department mailing list?

WHEELER CONDENSER & ENG. CO. **CARTERET, N. J.**

Manufacturers of:

Condensers; Centrifugal Pumps; Vacuum Pumps, including the patented Wheeler Steam Jet Air Pump; Evaporators; and all other condensing equipment for marine service.

38

Generated on 2024-09-12 08:18 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Condensers and Auxiliaries are the subject of a very complete catalogue of 192 pages, published by the C. H. Wheeler Manufacturing Company, Philadelphia, Pa. This catalogue is profusely illustrated and constitutes almost a text book on the subject. We quote in part from the introduction: The advent of the steam turbine, operating either high pressure or completing the expansion of steam begun in a reciprocating engine, has brought with it the demand for high vacuum. The necessity of producing vacua of 28 and 29 inches within reasonable limits of size and operating cost has revolutionized condenser practice, with the result that modern condensing machinery is far in advance of that of a few years ago. As the function of a condenser is to increase the economy of a power plant, it follows that the selection of the most suitable apparatus is by no means merely a question of first cost. The important points to be considered are economy in maintenance charges, low operating cost and reliability. Operating cost is a very large item and differs widely with different types of condensers, viz., jet, barometric and surface. Other points to be considered are the load factor of the turbine or engine, the cost and net lift of the water used, the location of the plant and the use or non-use of a water cooling tower. As explained in another chapter, the cooling tower may frequently prove the deciding factor in the choice of a condenser. Condensers of the same general type necessitate the consideration of the parallel flow and counter-current principles, arrangement of tubes and baffles, direction of flow of the steam, together with the type and efficiency of the feed-water heater, all of which affect the economy of the performance."

The De Laval Oil Purifier is described in a circular published by the De Laval Separator Company, 165 Broadway, New York. "The use of the De Laval oil purifier eliminates the pitting of cylinder walls. The use of low-priced, high-sulphur fuel oils in Diesel and semi-Diesel engines has its main drawback, in that sulphuric acid is formed, which rapidly attacks and pits the walls of the cylinders and cylinder heads. These high sulphur oils invariably contain a certain amount of water. During the combustion of the fuel charge the oxidation of the sulphur forms sulphur dioxide (SO_2), and this sulphur dioxide unites with the water, forming sulphurous acid (H_2SO_3). This acid unites with oxygen, forming sulphuric acid (H_2SO_4). The De Laval method of purification dehydrates this oil, thus eliminating any possibility of sulphuric acid being formed. It is therefore a necessity wherever high-sulphur fuel oils are used. Please ask nearest office for further information on centrifugal dehydration of high-sulphur oils. The knowledge and experience of our experimental department are at your service."

Pumps for Marine Service are described and illustrated in a catalogue just issued by the Morris Machine Works, Baldwinsville, N. Y. "No ship's equipment is complete without a Morris pump installation. It plays a very important part in procuring the highest efficiency in every ship's power plant. Extreme simplicity of construction, reliability and low operating cost are only a few of its many advantages. Morris pumps may be used for furnishing the ship's water supply or for surface condenser systems. Built in all sizes for belt, direct connected, steam or electric drive. Our catalogue of Morris pumps describes fully our complete line of centrifugal pumps, hydraulic dredges and steam engines. Write for it."

Steam Gongs that are especially adapted for fog signals are among the steam specialties described and illustrated in a catalogue published by the Union Water Meter Company, Worcester, Mass. "Our steam gongs are different from ordinary steam whistles and produce an immense volume of sound, which, while soft and pleasing nearby, extends over an incredibly large range. We have authentic reports of these gongs having been heard over distances upwards of twenty miles. The two larger bells produce the volume and power of sound to cover long distances, while the small bell has the penetration necessary to be heard above nearby noise."

GREASES

for every lubricating problem.

Dixon's Graphite Greases are made with different characteristics for various lubricating problems. They vary in consistency, heat-resisting ability and kinds of ingredients for the problem each is peculiarly fitted to solve. The grease best adapted for one kind of lubrication may be entirely worthless and harmful for another type.

DIXON'S
GRAPHITE GREASES

are the result of over 90 years' manufacturing experience. They are made from the highest grade oils and greases and are scientifically combined with Ticonderoga Flake Graphite.

If you have a lubricating problem to solve write and explain your difficulty to us. We will recommend the correct grease for you to use.

Booklet No. 75-KP will be of interest to those who have occasion to use Greases, Paint, Pencils and Crucibles.

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY

ESTABLISHED 1827

WANTED

AN INTEREST IN A WELL ESTABLISHED REPAIR YARD OR COMPANY ALLIED TO THE SHIPBUILDING BUSINESS

Now Manager of a large shipyard completing a $14,000,000 contract.

Have associated with me men well known in ship repair work on the Great Lakes and Atlantic Coast.

Wish to deal direct with the controlling interests and would also be interested in any proposition relative to construction work abroad.

Have built three yards in this country and operated two well known plants.

Trust you will appreciate the necessity for strict confidence. Address Box 400, care of Marine Engineering.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

Wanted—MARINE ENGINEERING for 1917. Unbound preferred. Address *Hewitt's Bookstore,* Long Beach, Cal.

Shipbuilder—Open for suitable responsible position; last employed as Superintendent of hull construction; capable man in drafting office. Over 20 years' varied experience, principally on small and light draft river work. Address *Box* 779, care of MARINE ENGINEERING.

Engineer, 39, mechanical and marine, with scientific training, B. Sc. (Glasgow) Associate Member, Institution Civil Engineers (London), and years of practical experience in works, also was Lloyd's Surveyor, is open for engagement. Has a perfect knowledge of Russian and German. Address *Box* 850, care of MARINE ENGINEERING.

Graduate Naval Architect, now in Government service, desires place as general superintendent. Familiar with office and outside work on hull and engines and modern shop practice. Specialty, the logical application of bridge shop methods to hull construction. Address *Box* 375, care of MARINE ENGINEERING.

Wanted—Position as Mold Loft Foreman by man with record of successfully laying down lines for twenty-three ships of various designs, with template work thereon. Thoroughly qualified loftsman, including shell development. Good systematizer. Technical education and practical experience in drafting, plate shops, outside construction and production. Address *Loft Foreman,* care of MARINE ENGINEERING.

Young Man, 27, now in Construction Corps of Navy, graduate, four years' course, naval architecture and marine engineering at leading university, degree B. S. Two years' subsequent experience in hull scientific work, including preliminary designing and estimating in large office previous to entering navy; also some outside experience. Responsible position desired with shipbuilding firm or naval architect. Expect release from navy soon; location immaterial, but east coast preferred. Address *Box* 502, care of MARINE ENGINEERING.

Graduate Naval Architect, connected with yard finishing Shipping Board contract, has spare time available for designing. Address *Naval Architect,* care of MARINE ENGINEERING.

For Sale at a Bargain, six used marine projector searchlights, complete with dispersion lenses and rheostats; 220-volt D. C. Carlisle & Finch Company's make. Form 1-M, plain hand-controlled, 14 inches. Have been in use for one year. Good as new. Make us an offer. *American Rolling Mill Company,* Middletown, Ohio.

Marine Refrigeration — All-around Engineer, Practical and Technical, with many years' experience, marine (and land), with leading British firms, CO_2 and NH_3 systems, and all classes of cargo and provision carrying, who have ORIGINATED CO_2 refrigeration with British firm, desires post with American engineers to commence refrigeration in new shipbuilding. Can carry job through, *i. e.,* estimation, design (on blank sheet, not copy), manufacture, erection, running, etc. Address *Marine Refrigeration,* care of INTERNATIONAL MARINE ENGINEERING, 8 Bouverie street, London, E. C. 4.

Murray Steam Power Plants are the subject of Catalogue 85, published by the Murray Iron Works Company, Burlington, Ia. "The advantages of buying the engines, boilers, heaters, pumps and piping of one company are obvious and numerous; you get a harmonious whole that can be obtained in no other way. Consider the correspondence and the sending of drawings back and forth between the purchaser, the engine builder, the boiler maker, the heater man, and the pump and piping people that are necessary in order to make the connections between them. Consider also the delays that ensue and the inconveniences of having the parts that are wanted first come last, and figure the unnecessary and extra freights that have to be paid. Imagine how each manufacturer will blame the other for any trouble or deficiency or failure to perform, and generally prepare for grief if you buy your power plant piecemeal. On the other hand, count the advantages of being able to buy the best kind of an engine—either Corliss or slide valve—and the best boilers and heaters from one responsible company that will take an equal interest and pride in both the engine and the boiler, and whose different departments, while competing with each other for excellence, are yet co-operating heartily. The parts will fit each other, they will be of harmonious proportions, they will be shipped in proper order, and can often go on one car, and one erecting engineer can superintend the whole job."

A General Catalogue and price list is issued by the Kennedy Valve Manufacturing Company, Elmira, N. Y. In compiling the catalogue the company has endeavored to present all essential features in a simple and at the same time comprehensive manner. 122 pages; illustrated.

"Labride" Reaming and Countersinking Machines are described in Bulletin 201, published by the Lakeside Bridge & Steel Company, North Milwaukee, Wis. The catalogue describes the machine as follows: "The machine consists of a movable trolley mounted on a 16-foot boom, constructed of structural shapes, which in turn is supported on cast iron wall brackets. Length of boom can be made to suit conditions. When used as a radial drill this machine has many advantages over the ordinary radial. It has a wide possible range, takes up little space, and when not in use can be swung out of the way. The trolley is rigid and moves with extreme ease from end to end of arm. The feeder lever is counter-weighted, and can be adjusted to allow moving spindle vertically without excessive energy on the part of the operator. The trolley consists of a cast iron frame upon which a motor of ample size is mounted. The gears are connected direct to motor, and the bevel gears which drive main spindle run in an oil bath, thereby insuring minimum wear. Three ranges of speed can be had through gear changes. The three speeds of main spindle are approximately 80, 115 and 170 revolutions per minute. The main spindle bearings are bronze bushed. Other bearings are babbitted with a good grade of babbitt. All gears are cast steel, pinions are forged steel; all teeth are cut from solid metal; shafts are cold-rolled steel. The spindle has a vertical movement of 11 inches, and has a five-point adjustment, which gives an additional 11-inch adjustment vertically. The spindle is bored for a No. 4 Morse taper shank. A capable operator can drill on the average of 125 7/8-inch diameter holes per hour through 1/4-inch metal, and ream or countersink 250 to 300 holes per hour. All gears outside of main frame are guarded to prevent workmen from coming in contact with moving parts. Collector wires are guarded by a metal cover. This machine can be equipped with either alternating-current or direct-current motors. Current is collected from wires which are installed on side of channel boom. These wires are enclosed. We can make delivery in four to eight weeks, depending upon conditions in our shop at the time of placing order and the delivery we can get on the motor. We have several machines in our shop, and have sold them to various shipbuilding and structural plants over the country. In all instances they have proved to be an efficient labor-saving machine."

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The
Shipbuilders' Hand Book
by Harrison S. Taft
Price 15/-
For sale by
BENN BROS., Ltd.
8 Bouverie Street, London, E. C. 4

SHIPYARD EXECUTIVE
now holding executive position of highest responsibility directing the construction of Government Program of steel and wooden ships will shortly be resuming commercial work.

Have gone through all technical grades from apprentice-draftsman to present position and will consider offers of consulting or executive positions of first importance.

Address Box No. 88, care of Marine Engineering.

MODEL MAKING
This is a book for the professional and amateur mechanic. It does not describe the construction of toys, but is devoted to model engineering and the mechanical sciences associated with it. It contains descriptions and illustrations of the complete models made by some of the leading model engineers in the country, and is the only book published on the subject. For the inexperienced workman who wishes to make models, but who is untrained in the fundamental mechanics, this book will furnish all the information necessary. For the experienced there are many hints and short cuts which will be found helpful. This book is full of suggestions for those who like to make things, amateur and professional alike. By Raymond F. Yates, **400 pages, 303 illustrations. Price $3.00.**
For Sale by MARINE ENGINEERING

Cumberland Shipbuilding Co.
SHIPBUILDING AND REPAIR PLANT
SOUTH PORTLAND, MAINE
Telephone 6936
Builders and repairers of all types of wooden vessels.
New Marine Railway of 2,500 tons capacity. Inquiries solicited for estimates, costs and dates. Most modern shipbuilding plant on the Atlantic Coast, with every facility for expeditious work. Most accessible harbor on the Coast.

FOR SALE
Triple Expansion Marine Engine 18" x 32" x 54"—42" stroke. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾" stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

WANTED
Bound Volumes of
MARINE ENGINEERING
for the years 1912-13-14-15-16-17
Address, giving price asked,
"E. L. S.," care of MARINE ENGINEERING

OVER
350 VESSELS
(NOW BUILDING)
WILL CARRY
PROPELLERS
DESIGNED BY
THE AMERICAN SCREW PROPELLER CO.
1326-28 CHESTNUT ST., PHILADELPHIA, PA.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

De Laval Gears and Turbines are described in Catalogue M-46, just issued by the De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J. "The design is based upon an experience of 25 years in building double-helical gears for steam turbine service. Special machine tools and special methods have been developed by us to secure the absolutely correct tooth angle, shape of tooth and pitch which are necessary to give even contact surface over the whole length of the tooth, and which are absolutely essential to noiseless, efficient and vibrationless operation. De Laval gears and turbines are built of the best materials by highly skilled workmen, working on a limit-gage and interchangeable basis. The success and long life of the hundred of De Laval gears in daily operation show that De Laval gears are correctly proportioned, accurately cut and maintained in correct alignment by the De Laval design of gear case and bearings. The De Laval geared turbine constitutes the most simple, compact, efficient and reliable power unit."

The American-Thompson Improved Indicator is described and illustrated in a 32-page catalogue published by the American Steam Gauge & Valve Manufacturing Company, 208 Camden street, Boston, Mass. "Full credit is due and freely given to the late J. W. Thompson for having invented and perfected the only flawless indicator known, the American Thompson Improved Indicator. The American Steam Gauge Company was the original manufacturer, and is to-day the sole owner of the supplementary patents to the genuine J. W. Thompson indicator. The steam gage and safety valve, of which we were the first and are to-day the largest manufacturers in the United States, were the most important inventions in the development of steam power, but the indicator is more wonderful than either, in that it shows absolutely the exact conditions of pressure within cylinders, and permits of adjustments which not only insure an economical use of steam developed, but at the same time, by the corrections thus effected, add greatly to the life of the engine."

The Sprague Adjustable Loop System of Overhead Material-Handling Machinery for terminal sheds is described in Bulletin 48713, published by the Sprague Electric Works, 527 West Thirty-fourth street, New York. "This bulletin is devoted to a description of the function, operation and construction of an overhead mechanical system for handling miscellaneous and bulk freight and materials in terminal sheds. This system is known as the Sprague Adjustable Loop System, because the overhead track on which the hoisting and conveying machines are operated is in the form of a continuous, unbroken loop, which is adjustable in length. The adjustable loop system is applicable to terminal sheds for the temporary storage of freight or material before loading or after unloading from ships, barges or railroad cars. The primary purpose of the system is to speed up the movement of freight in the shed, to reduce the cost of handling it, to utilize the shed space to the fullest extent, to speed up unloading and loading and to relieve congestion at loading and unloading points. In some applications it is used directly for loading and unloading, in others only for handling in the terminal sheds."

A Locomotive Crane of from 20 to 30 tons capacity is one of the large line of cranes made by the Edward F. Terry Manufacturing Company, Grand Central Terminal, New York. Bulletin No. 2 describes this crane and calls attention to the following improved features: "All clutches are of extra large size and of the inside band brake type, which has proved its superiority over all other forms of clutches in power transmitted, ease of adjustment and low cost of maintenance. The levers operating the clutches are designed so that the mechanism is free from eccentricity and unbalanced thrusts, thereby making the work of shifting easy for the operator and at the same time reducing to a minimum the wear of these most important parts of the crane. The heavy stresses between the rope tackle and the car trucks are carried throughout by structural steel, which has been found more reliable and more capable of standing hard usage than cast iron or cast steel. The turntable is prevented from tipping by the use of rollers bearing against the underside of the base ring, rather than by the center pin, as is the usual practice. By the use of center as well as end outriggers of the telescopic type, exceptionally heavy loads may be safely handled. The boom-hoisting drum is driven by means of a train of spur and bevel gears, of which the friction is so much less than the worm gear ordinarily used that the boom may easily be raised with full load on the hook. The boom-hoisting drum is equipped with an automatic holding and lowering brake of the inside band type, whereby the boom is positively held in position and is under complete control of the operator at all times. The brakes for the main drums are so arranged that the speed of operation and safety are very much increased by means of a device which allows the load to be hoisted while the brake is set. Special attention has been given to the arrangement and location of the operating levers so that the operator has the best possible view of the work which he is performing. The crane has a nominal capacity of handling a 20-ton load at a radius of 12½ feet without the use of outriggers, and 30 tons at 12½ feet radius with center and end outriggers. Its capacity, however, varies with the radius and length of boom used."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

AMERICAN ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 808 Vine St., Camden, N. J.

THE AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 127 Woodside Ave. Narberth, Pa.
Vice-President—W. A. Leavitt, Jr., New York Shipbuilding Corporation, Camden, N. J.
Secretary—B. G. Barnes, 1596 North Ave., Bridgeport, Conn.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.

NATIONAL MARINE ENGINEERS' BENEFICIAL ASSOCIATION OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Bienville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

INSTITUTE OF MARINE ENGINEERS INCORPORATED
The Minories, Tower Hill, London.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

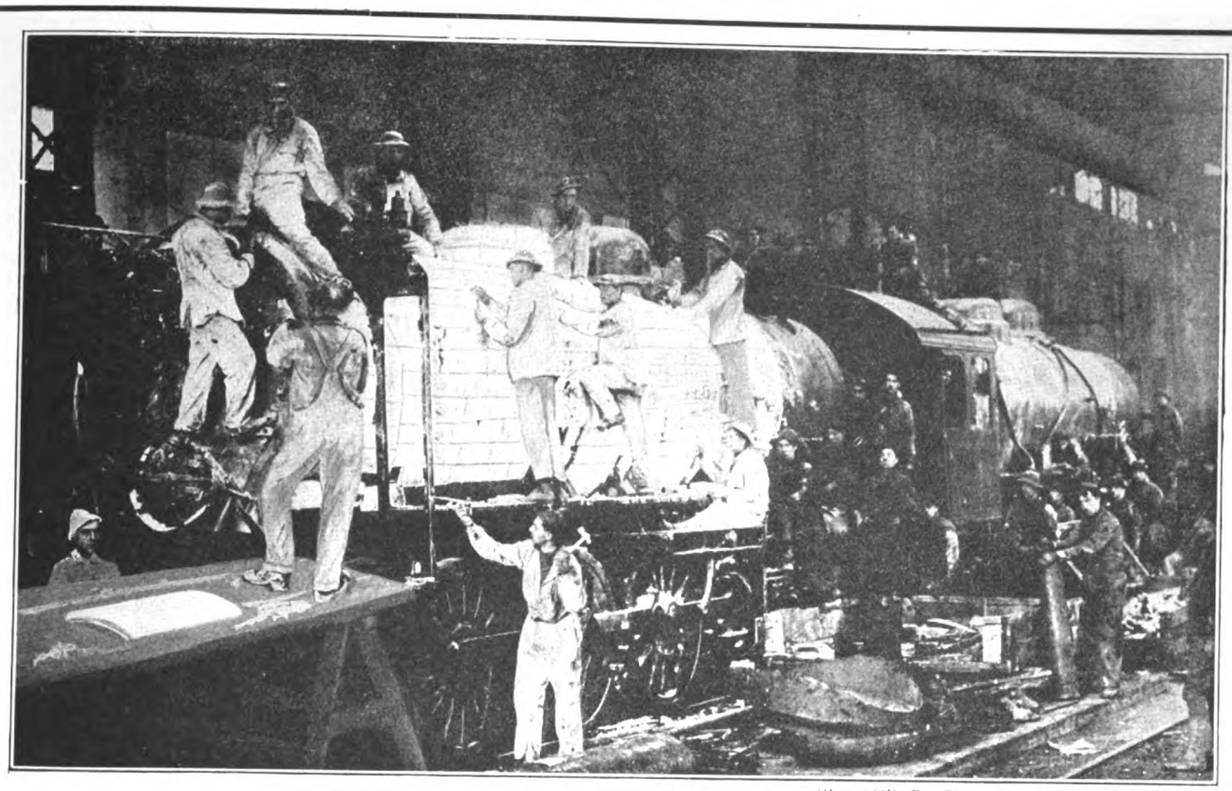


Photo (C) By Committee of Public Information

U. S. Locomotives in France Defended by "85% Magnesia"

WHEN our doughboys in France heard the deep-throated whistle of the American locomotives, instead of the shrill squeak of the French locomotives, they said, "That sounds like home."

Uncle Sam shipped hundreds of locomotives for our Army transport, to be assembled over there. For their insulation (their "lagging" underneath their iron jackets) he sent "85% MAGNESIA." The photograph shows our workmen laying it on.

Locomotives Must Have "85% Magnesia"

Why? Because that is how all the big American locomotives are protected here, and Uncle Sam wasn't experimenting with inferior insulations for his steam. Besides, he knew all about "85% MAGNESIA," for his Navy has specified it since 1888.

That long and regular use of "85% MAGNESIA" for steam insulation on our powerful locomotives, is a most conclusive proof of its efficiency and durability.

Locomotives put heat insulation to the severest test. They live on their steam; they require its maximum power on the minimum of coal; their vibration would quickly destroy any inferior insulation.

For all that stress and strain they have found that "85% MAGNESIA" is the only covering that stands up to all tests.

"85% Magnesia" Reduces Your Overhead

What "85% MAGNESIA" does for the locomotive and the warship, what it does in the biggest and most exacting power-plants, *it will do for you.*

It saves your coal. It increases your steam-power for any pressure. It lasts *without depreciation of efficiency, as long as the pipes and boilers beneath it.*

As wages and other costs go up, "85% MAGNESIA" keeps your overhead down.

To find the actual saving in dollars and cents by the use of "85% MAGNESIA" coverings in your plant or in your home write for the Table prepared by the Mellon Institute of Industrial Research of Pittsburgh University. To Engineers and Architects we will send also the Standard Specification of the Magnesia Association, compiled by the Mellon Institute, giving the exact thickness for every kind of treated surface.

MAGNESIA ASSOCIATION of AMERICA

85% MAGNESIA
UNIVERSAL COAL SAVER

**721 Bulletin Bldg.
Philadelphia
Penna.**

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D. Crabbs The Philip Carey Co. . . Cincinnati, Ohio
Alvin M. Ehret Ehret Magnesia Mfg. Co., Valley Forge, Penna.
J. R. Swift . . . . The Franklin Mfg. Co., Franklin, Penna.
R. V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Penna.

Copyright, 1919, by M. A. of A. Permission to reprint by application.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

An Interesting Comparison between the old Scotch marine boiler and the Heine watertube boiler has been written by Charles H. Stoddard, consulting marine engineer for the Heine Safety Boiler Company, St. Louis, Mo. Two boilers of approximately the same capacity are illustrated. One is a Scotch marine boiler, 14 feet 9 inches in diameter, containing 2,700 square feet of heating surface and built for 210 pounds working pressure. The other is a Heine marine watertube boiler, also containing 2,700 square feet of heating surface, and built for a working pressure of 225 pounds per square inch. "The Scotch boiler is fitted with 3-inch tubes and the Heine boiler with 3½-inch tubes. Both are suitable for either coal or oil fuel, but are here considered as fitted for oil burners. To the weights given for the Scotch boiler must be added 7 tons to cover the difference in weight of breechings, fire fonts, boiler mountings, lagging, retarders, etc., which are either included in the weights given for the Heine marine boiler or are unnecessary. Cargo steamers, such as have been recently built for the Emergency Fleet Corporation, are each equipped with three boilers. The weights involved are therefore 253½ tons for the Scotch boiler installation against 162 tons for the Heine watertube installation—a saving in fire-room weight by the use of Heine marine boilers of 91½ tons. An actual possible increase of paying cargo capacity of approximately 100 tons should be of interest to any steamship owner. Some watertube boilers are even lighter than the Heine boiler. It is stated by the Heine Safety Boiler Company that they also could make the Heine boiler lighter if extreme light weight were believed advisable. However, that argument has no place in this article. The Scotch boiler is held in esteem by many engineers because of the large volume of water it contains ready to turn into steam the instant a greater demand for steam is made upon it. This is a reservoir of power that tends to reduce fluctuations of pressure in operation. The manufacturers of the Heine boiler recognize the value of this reservoir of power. They do not approve boilers of the ultra light weight type, therefore they fit their boilers with waterlegs 11 inches deep instead of 5 inches or 6 inches. These waterlegs have not been stinted either in height or width, nor are they broken up into numerous 'headers,' nor is their capacity reduced by partitions and obstructions. The capacious waterlegs are stayed with screwed staybolts, from which, within the water space, the screw threads have been carefully removed. As for comparative cost, one has but to look at the illustrations. Note the 19/16-inch and 1¼-inch plates, the great weight of high-priced steel, and the many costly flanged heads used in the construction of the Scotch boiler, and note that the few plates used in the watertube boiler for higher working pressure are but ½ inch and 5/8 inch thick. After one notes these points he realizes why the cost of the Scotch installation exceeds often by as much as 50 percent the cost of a watertube installation."

Rich Twist Drills are described by the Rich Tool Company, Chicago, Ill. in a bulletin just issued. "Locomotive automobile, aeroplane, gun and machine parts, subject to maximum shocks or great frequency or torsional strains are first forged. Why? Because forging increases their physical properties—rearranges the structure to withstand stresses in any desired direction, and gives each portion the required amount of working. At the proper temperature the flutes of Rich tools are first forged and twisted. The result is a blank thoroughly uniform in every part and of superior physical properties to the bar from which it was made. Not welded brazed or built up—made in one piece of the most suitable and best high-speed steel of the proper composition—every operation and process is conducted with care and judgment. It is unnecessary to tell you that this drill will produce maximum service—it is built for it. Taper shank, standard and over-size straight shank, long and short set; high-speed bridge reamers, countersinks track and bonding bits, rivet sets, etc.

Prest-O-Lite Service Never Depreciates

More than 40 Plants and Warehouses Ready to Serve you

PREST-O-LITE Service never wears out or grows obsolete and you never can outgrow it.

Of what other manufacturing facility is this true?

Once you subscribe to PREST-O-LITE Service it is yours *for life*—a definite, permanent, transferable right which fits the varying requirements of your business perfectly—as flexible as a sectional bookcase.

Prest-O-Lite

DISSOLVED ACETYLENE

The Universal Gas with the Universal Service

Physically, a self-contained all-purpose unit of ideal form—portable, sturdy, accessible anywhere.

Technically, the one component gas which satisfactorily, simply, and economically performs all heating operations, from the heaviest welding and cutting to the lightest soldering and brazing.

Legally, a clean-cut, life-long obligation which the Company is bound to fulfill. Your rights are transferable any time, to anyone, without notice to us.

Thanks to PREST-O-LITE's part in the war, our subscribers may draw upon a plant and cylinder equipment not equalled for size and quality anywhere in the world.

Better write us about it—there are ample facilities right near you.

THE PREST-O-LITE CO., Inc., General Offices, 30 E. 42nd St., New York City

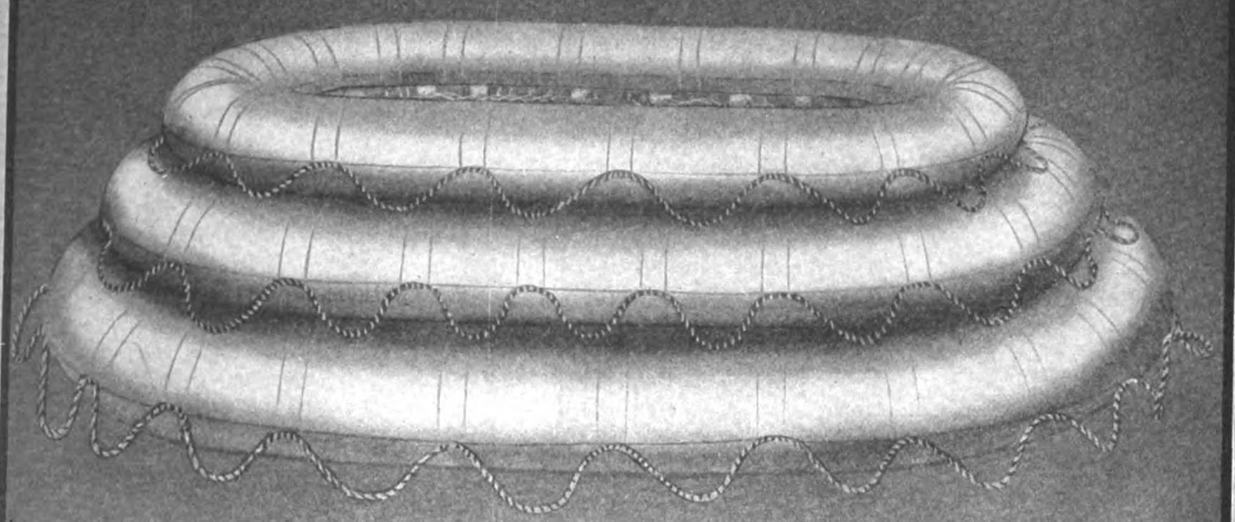
Kohl Building, San Francisco

120

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. **50 E. 42nd Street, New York**

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Pump Data Bulletin No. 102 has just been published by the Aldrich Pump Company, 30 Church street, New York. "This data is by no means complete as to our lines of effort, as there is an Aldrich Triplex or Quintuplex Pump for every industrial, engineering or mining purpose. Separate pump data is issued, and will be mailed upon request, stating service intended for. We solicit correspondence in relation to all pumping problems, and our engineering salesmen are ready to call and give personal attention, also make recommendations covering the most suitable and economic equipment for the work to be performed."

How to Keep Boiler Tube Caps in Prime Condition is told in Booklet 75-D, published by the Joseph Dixon Crucible Company, Jersey City, N. J. "The way to do it is to smear them with Dixon's graphite pipe joint compound before replacing. This compound never 'sets' or hardens like cement. The caps can be removed and replaced whenever desired without the slightest trouble. It will never be necessary to regrind them to get a steam-tight fit with the seats. Dixon's graphite pipe joint compound is equally valuable for all threaded or flanged joints, for bolts and nuts of all kinds, metal gaskets, etc. It makes the tightest joints, prevents rust and corrosion, and does not get hard or brittle. For more complete information write for Booklet No. 75-D."

"The Trackless Train" is the title of a 16-page illustrated booklet issued by the Mercury Manufacturing Company, 1118 South Halsted street, Chicago, Ill. "To define the Mercury tractor from the point of use, it is only necessary to say that it is designed to pull trackless trains of trailers without the limitations as to pathway which constrict such devices as the industrial railroad or the belt conveyor. Instead of carrying it is designed to pull or push loads. With respect to construction, it is a trackless locomotive driven by an electric motor which obtains its current from storage batteries contained in the body of the tractor. In aiming to make it useful in industries where it must work in narrow aisles, difficult alcoves, tunnels and doorways, the Mercury tractor is designed to have a compacter body and a smaller turning radius in proportion to its battery capacity than any similar device. The function of the Mercury tractor is to introduce a more efficient and economical method of materials-handling. What the Mercury Manufacturing Company introduces into industry, therefore, is not an apparatus, but an efficient and economical system of transportation, supplying at the same time the power unit that makes the system possible. Mercury tractors are not merely machines, but power units of a transportation system from which they cannot be dissociated."

The Electro-Hydraulic Steerer, made by the American Engineering Company, Philadelphia, Pa., is described in a circular just issued. Following are some of the claims made for this steerer: "It is absolutely reliable and positive in action; extremely sensitive and prompt in starting; ample in holding power and provided with positive relief against rudder shock; mechanically efficient and requires minimum attention; flexible as to arrangement about the rudder stock; compact, requiring less space than any other steerer of like power; the nearest approach to the ideal steerer."

Hydraulic Presses for bending pipe, rods, etc., are described and illustrated in Catalogue 98, issued by the Watson-Stillman Company, 36 Church street, New York. One of the illustrations shows one of the company's large line of presses for bending and straightening operations. "This machine works on a water pressure of 1,500 pounds per square inch. The pins are interchangeable in any of the holes. The ram is double ended, and is actuated by two cylinders, enabling the operator to exert force from either side of the table. The valves are placed in one body, and connecting levers at either side of the press govern the movements completely. We build hydraulic presses for every purpose where hydraulic pressure is a possibility; also pumps, accumulators, valves, fittings, packings, shears, riveters, punches, jacks, frame benders, etc."

IRON STEEL METALS

ARTHUR C. HARVEY CO.

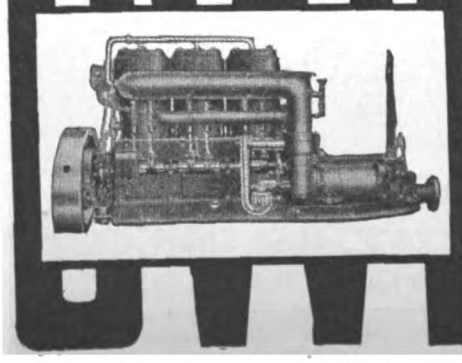
374 Congress Street Boston, Mass.

Tel., Main 7000

BOILER TUBES, RIVETS, PLATES, TANK STEEL, FLOOR PLATES, BARS, SHEETS, STRUCTURAL SHAPES, COLD ROLLED SHAFTING.

WE ARE EQUIPPED TO CUT TO SIZE ANYTHING CARRIED IN STOCK.

POWER



WOLVERINE

"The Motor With the Bore & Stroke"

PLUS FUEL COST REDUCED

From 70 to 80 per cent without sacrificing reliability, flexibility or control. Perfect combustion on kerosene or lowest grade of Coast Distillate.

5 to 200 H. P. — 1 to 6 Cylinders

Ask for Catalog 73.

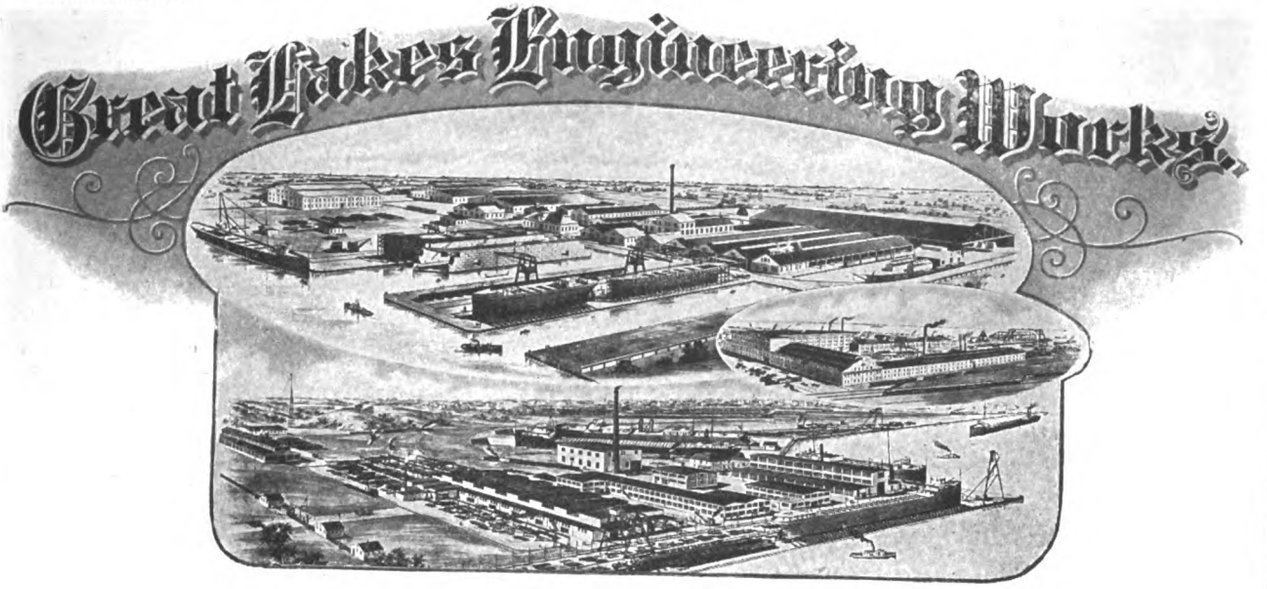
WOLVERINE MOTOR WORKS, Bridgeport, Conn.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

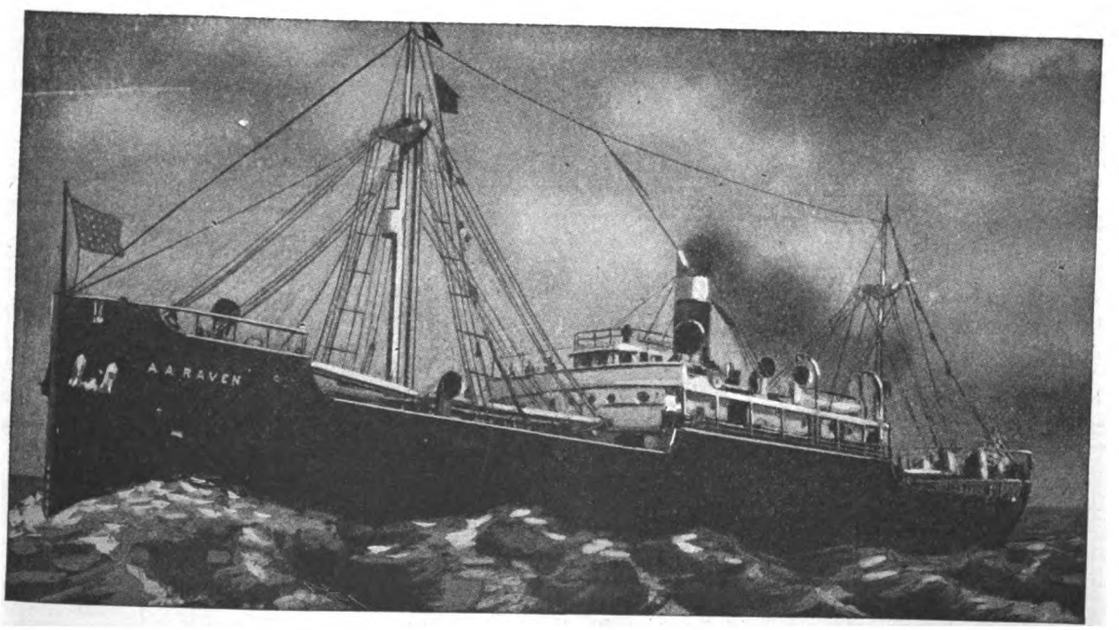
ANTONIO C. PESSANO, Chairman of Board
JOHN R. RUSSEL, President
H. W. HOYT, Vice President & Treasurer
J. A. UBSDELL, Vice Pres. & Gen'l Manager
F. G. MORLEY, Secretary

Great Lakes Engineering Works



Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Kingsbury Thrust Bearings are described by Albert Kingsbury, Pittsburgh, Pa., in a profusely illustrated catalogue of 36 pages just published. The principle of operation is explained in part as follows: "The Kingsbury bearing floats the load on a film of oil which completely separates the bearing surfaces without employing a high-pressure oil pump. The bearing forms its own oil film automatically. Its principle of operation is as follows: Consider a flat metal table with a ledge around it and containing oil to a depth of a quarter inch; if a rectangular metal plate supporting a weight is placed in the oil the plate will sink and squeeze out practically all the oil between it and the table. If, however, the plate is pulled along the table by a horizontal force it will tilt up at the advancing end, and move along in that position, floating on a thin, wedge-shaped film of oil whose mean thickness depends on the load, speed, viscosity of the oil, proportions of the plate surface, position of the load on the plate, and apparently not at all on the kind of metal used. Since the load is floated on the oil it is evident that the sum of the upward pressure within the liquid must equal the load supported. The mean pressure is easily calculated. The actual pressure varies from nothing at the edges of the plate to a maximum about under the center of the load. This maximum is approximately twice the mean pressure. The friction or force necessary to move the loaded plate along as it floats on the oil film depends upon the velocity, the viscosity of the oil and the film thickness. The mean thickness of the film might easily be a thirty-second of an inch for a light load moving at very high speed on a medium grade of oil. A heavy load at low speed might thin the film down to less than a thousandth of an inch. There is a certain place on the floating plate that will support a greater load than any other. There is another place, almost coincident with the above, where a given load may be placed and floated on the film with a minimum of friction. These places are behind the center, looking from the advancing edge, *i. e.*, at a point about 60 percent of the length of the plate from the advancing end."

The New Steering Gear Catalogue just issued by the American Engineering Company, Philadelphia, Pa., is a handsomely printed and illustrated booklet of 28 pages. The introduction reads as follows: "For more than fifty years the American Engineering Company and its predecessors, the American Ship Windlass Company and Williamson Bros., have been developing a line of marine auxiliary machinery, the chief characteristics of which are reliability, durability and accuracy of operation. The scope of these products does not permit detailed discussion of all the variations which could be made to meet peculiar conditions. Our aim, therefore, is to give concise descriptions and information which will enable customers to determine the general characteristics of the various types of equipment. Special problems should always be the subject of consultation. We shall be pleased to assist at any time in their solution as regards the selection or adaptation of any of our products. To keep pace with the rapid advance of marine auxiliary equipment, our engineering department is constantly studying to better our standard machinery or perfect new types which show improvement over the old. Hence some of the illustrations in this catalogue show designs superior to those in our last edition. On the following pages we briefly describe our standard line of steering gear, a subject of utmost importance to the safety of the ship. Generally speaking, the subject of steering gear is divided into three groups: Hand steerers, transmission systems and power steerers. Each of these groups serves a particular function in connection with steering."

The Babbitt Adjustable Sprocket Rim with Chain Guide, adapted especially for marine use, is described in a circular issued by the Babbitt Steam Specialty Company, New Bedford, Mass. The Babbitt adjustable sprocket rim with chain guide has become the most important factor for simplifying piping arrangements, reducing danger and expense, and in making out-of-the-way valves convenient to operate from the floor. The Babbitt appeals strongly every heating plant owner, to operating and consulting engineers, architects, contractors, building superintendents, and all others who have to do with valves and piping."

REG'D TRADE MARK

INTERNATIONAL

COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS

In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually

Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING

INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N.Y.

IMPORTANT NOTICE TO SUBSCRIBERS

Our subscribers are requested to notify us immediately whenever they change their address. Otherwise they cannot keep their files unbroken. If subscribers move without notice to us, we cannot duplicate numbers already sent to their old addresses, as many times they are out of print.

MARINE ENGINEERING 6 EAST 39th STREET, NEW YORK

VALK & MURDOCH COMPANY

CHARLESTON, S. C.

Builders of Marine Boilers, Scows and Lighters

8,000-Ton Floating Drydock		1,500-Ton Marine Ry.		500-Ton Marine Ry.	
Length on Blocks	440′	Length on Blocks	220′	Length on Blocks	100
Depth over sill	22′	Depth over Blocks	14′	Depth over Blocks	7

Marine Repairs a Specialty

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sun Marine Oils

HAVE PROVED THEIR WORTH

QUALITY SERVICE

RELIABILITY EFFICIENCY

Good Ships deserve Good Oils

Let our engineers solve your engine room troubles

SUN COMPANY

1428 So. Penn Square - - - PHILADELPHIA, PA.

STOCKS CARRIED AT

New York City Boston Philadelphia Baltimore Pittsburgh Cincinnati Buffalo St. Louis
Chicago Minneapolis Toledo Newark Newport News Detroit Atlanta New Orleans Sabine

Generated on 2024-09-12 08:15 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

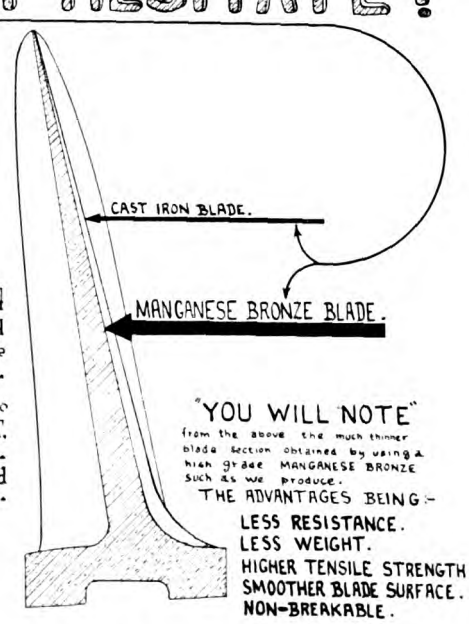
Plate casters for handling large and awkward shaped plates between the various operating units of a plant are described in a circular published by the Hart Roller Bearing Company, Orange, N. J. "Shipbuilders are confronted with the problem of handling and routing large and often awkward shaped plates between the various operating units of the plant. This problem is solved by short pipe standards being attached to the floor surrounding the shearing, punching and forming presses, on top of which are mounted Hart universal plate casters. Big cumbersome plates can be transported throughout the plant with the utmost speed, convenience and economy. Direction of movement may be changed instantly without undue friction or marring of the work. Hart universal plate casters have only six parts—base, three roller bearings, ball and cover, which fits close and excludes all dirt. Stock sizes have 3-inch and 4-inch balls, but we are prepared to meet special requirements. Float your plates where you want them."

"The Importance of a Strong Constitution" is the title of a circular issued by the Coes Wrench Company, Worcester, Mass. "A man who is sick most of the time cannot accomplish much—nor a wrench—both must have a strong constitution. Just as each part of the human body must contribute its share of strength, so must each part of a wrench unite with the other parts for this same accomplishment. There must be no weak parts. Coes 'Steel-Handle' Wrench is a good .example of how strong and serviceable a screw wrench can be made when useless parts are eliminated. With a constitution made up of six solid, simple whole parts, all united by the strong Coes method, there isn't a sign of weakness in a Coes steel wrench anywhere. These two models are especially made for trying service, in moisture (hot or cold) and for heavy duty."

"The One Gas of Universal Service" is the title of a circular published by the Prest-O-Lite Company, Forty-Second Street building, New York. "What factory man, having to provide a source of power for his plant, would deliberately choose to install different types and kinds of prime movers for each department? Only the most unusual operating conditions could drive him away from a centralized power service, with its obvious economies, flexibility and certainty of supply. The same powerful considerations apply in choosing a gas supply for your blowpipe operations. There is only one process which meets all blowpipe requirements with the greatest working efficiency and lowest cost—oxy-acetylene. Whether it be a light soldering or brazing job or the heaviest welding or cutting, the ideal means is Prest-O-Lite dissolved acetylene—the universal gas with the universal service. Acetylene in its purest form is thus available to you, chemically dissolved so that you get a large quantity in small bulk. Only one stock of cylinders, one kind of gas, one kind of operators and equipment—oxy-acetylene." Presto-O-Lite service and the plan under which users enjoy it is an important matter to metal workers and factory operators. War demands forced the growth and development of years into months. There are more Presto-O-Lite plants, more cylinders than ever before. There's an efficient well-stocked source of supply in most every industrial center; plants and warehouses in 35 cities."

"Spraco" pneumatic painting equipment for shipyard use is described in an illustrated bulletin issued by the Spraco Engineering Company, Boston, Mass. "There are numerous concerns that employ the most efficient systems in many departments, but still use the slow, inefficient hand and brush method of painting. This is certainly inconsistent. Spraco pneumatic painting equipment is rapidly supplanting the other time-wasting methods all over the country, because one man with the Spraco outfit can do the work of half a dozen men using brushes. And Spraco insures a better job, every crack and crevice, every irregular surface, every part inaccessible to a brush, is smoothly coated with the Spraco paint gun. Spraco equipment raises your painting to the same efficient plane of the rest of your department."

"WHY HESITATE?"


CAST IRON BLADE.
MANGANESE BRONZE BLADE.
"YOU WILL NOTE"
from the above the much thinner blade section obtained by using a high grade MANGANESE BRONZE such as we produce.
THE ADVANTAGES BEING:-
LESS RESISTANCE.
LESS WEIGHT.
HIGHER TENSILE STRENGTH.
SMOOTHER BLADE SURFACE.
NON-BREAKABLE.

MORAL.
If you want STRENGTH use Manganese Bronze . . .
If you want the STRONGEST, use . . . . .
S.M.B. Brand
. . . . . .

WE HAVE MADE
PROPELLERS
FOR MANY OF THE
LEADING SHIPYARDS

WE ARE EQUIPPED TO HANDLE THE LARGEST PROPELLERS DESIRED, AND ALSO TO SUBMIT PRICES ON

PROPELLER PATTERN MACHINING DESIGNING

AMERICAN MANGANESE BRONZE CO.
HOLMESBURG, PHILA., PA.
(*MANUFACTURERS OF SPARE'S BRONZES*)

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

In its swift, smooth gliding over the pulleys of this highly efficient Power Plant, Test Special Rubber Belting typifies inherent strength and dependability.

THE BELT FOR ENDURING SERVICE

On drives of the hardest kind everywhere—in Saw Mills, Paper Mills, Cement Plants, Machine Shops, Textile Mills, etc., Test Special Rubber Belting not only is performing faithful service, but is standing guard against costly shut-downs and delays.

The friction surface affords the strongest pulley grip. The extreme flexibility permits the running over small pulleys at high speeds. The plies of cotton duck—of great tensile strength—are inseparably united by a tenacious rubber friction.

TEST SPECIAL RUBBER BELTING IS MADE TO SERVE YOU WELL

NEW YORK BELTING & PACKING FOUNDED 1846 INCORPORATED 1856

New York Belting & Packing Co.

MAKERS OF BELTING SINCE 1846

BOSTON
CHICAGO
NEW YORK
PHILADELPHIA
PITTSBURGH
ST. LOUIS
SAN FRANCISCO

NEW YORK BELTING & PACKING FOUNDED 1846 INCORPORATED 1856

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Automatic Compensator made by the Electric Controller & Manufacturing Company, Cleveland, Ohio, is described in an illustrated folder just published. "When you push the start button the operating coil in the automatic compensator is energized, and contacts are closed connecting the motor to the current supply lines through the transformer in the compensator. This gives reduced voltage to the motor and causes it to start up with the proper amount of current and no more. When the motor has reached the proper speed so that it can be safely thrown directly onto the supply line the automatic compensator will do this, and it will never do this at the wrong time. This leaves nothing to the judgment of the operator. All that he or she needs to know is when to start the motor and when to stop it. It is unnecessary to state that the only operation required to stop the motor is to push the stop button. The E. C. & M. automatic compensator works under oil. Do you realize what that means? In the first place we recommend that the automatic compensator be inspected at least once a year. Have you any electrical equipment that you inspect only once a year? All circuits are made and broken under oil and all arcs are extinguished by the oil. All moving parts are perfectly lubricated, as they work in oil. As a result the E. C. & M. automatic compensator can be used in the presence of inflammable gases. It can be used in dirty or dusty places. It can be used outdoors or can be used indoors where steam or other vapors are present. Acid fumes will not hurt it, because they can't get at the vital parts."

Dynamic balance obtained by a new machine built on a new principle is described by the Crawford Tool & Manufacturing Company, 1617 South Crawford avenue, Chicago, Ill. "For the solution of all vibration troubles as found in flywheels, pulleys, propellers, turbine rotors, separator discs, gear wheels, fans, all kinds induction rotors, connecting rods, clutch parts. This machine will show the exact amount of the counterweight required and the exact circumference plane where the counterweight should be taken off or added on."

Reflex Water Gages are described by the Jerguson Gage & Valve Company, Winter Hill, Somerville, Mass. "Advantages: Quick and reliable observation of the water level; safe, sure and durable at high pressures; not affected by cold air drafts; most effective protection against injuries to boilers and workmen; easily applied to all types of gage glass fittings. When filled with water the reflex gage always appears black; when empty it instantly shows white; no mistake possible. This feature alone is worth many times the cost of the Reflex. Send for catalogue of water gage apparatus."

The "Midwest" marine oil engine is described in a catalogue published by the Midwest Engine Company, Indianapolis, Ind. "From low-cost crude and fuel oils—the highest known efficiency for boat propulsion or auxiliary. Clutch type and directly reversible marine oil engines. Here is the Midwest-Diesel directly reversible marine oil engine—a brute for strength and a wizard for economy and efficiency. Among its distinctive features is the open crank case, that affords the utmost convenience for inspection and adjustment. Pistons, with their rings, are removable without dismounting the cylinder heads or connecting rods. Simple, positive control for maneuvering ahead and astern guarantees extreme flexibility of operation."

The Reilly Distiller is described and illustrated in Bulletin 228 just issued by the Griscom-Russell Company, 2124 West Street Building, New York. "The purpose of a distiller is to condense all or a part of the vapor from the evaporator to provide pure drinking water on shipboard. The Reilly distiller is a special type of condenser taking clean vapor, preferably from the evaporator, and condensing it in copper coils, thus insuring pure water. The construction is such that there is absolutely no possibility of the circulating water leaking into the distilled water chamber. It is readily seen that this is an important feature when using harbor or sea water for condensing."

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

STRATFORD SPECIAL NO. 1 MARINE OAKUM
receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. It meets the requirements of all of the United States Government specifications. For years we have guaranteed the quality of each bale to be standard of excellence and returnable at our expense if otherwise. More of this grade Oakum has been used by the United States Government and its contractors than all other makes combined, yet, not a single bale has been condemned or rejected, whereas it has replaced the condemned Oakum of almost every other make. Our experience, quality and service are worth more to you than we ask.
GEORGE STRATFORD OAKUM COMPANY Jersey City, N. J.

WE ARE SPECIALISTS IN
TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS
IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.
MAKERS OF IRVING'S SUBWAY (TRADE MARK) GRATING THE RETICULATED KIND

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SEVENTH EDITION

PRACTICAL MARINE ENGINEERING

REVISED AND ENLARGED

By Rear Admiral C. W. Dyson, U. S. N.

This book is devoted exclusively to the practical side of marine engineering and is especially intended for engineers and students and for those who are preparing for examinations for marine engineers' licenses for all grades. It gives complete details regarding marine engines and all that pertains to them, together with much information regarding auxiliary machinery. It covers the general subject of calculations for marine engineers and furnishes assistance in mathematics to those who may require such aid.

Boilers, reciprocating engines, steam turbines and reduction gears (mechanical, hydraulic and electric), are treated exhaustively. A separate chapter deals with internal combustion engines (Diesel and heavy oil) and producer gas plants. Oil fuel burning and the latest practice in superheated steam are taken up in detail.

The chapter headings include the following:

MATERIALS
- Fuels (coal and oil)
- Boilers (Fire tube and water tube)
- Oil Fuel Burning
- Marine Engines
- Reciprocating Engines
- Steam Turbines
- Internal Combustion Engines
- Gasoline
- Heavy oil (Diesel)
- Producer Gas

AUXILIARIES
- Pumps
- Condensers
- Feed Heaters
- Filters
- Evaporators
- Lubricating Devices
- Separators
- Blowers
- Pneumercators
- Time Firing Regulators
- Steam Traps
- Ash Ejectors, etc.

- Valves and Valve Gears
- Refrigeration
- Electricity
- Propulsion and Powering
- Operation, Management and Repairs
- Boilers, Engines, Turbines and Auxiliaries
- Indicators and Torsion Meters
- Special Topics and Problems
- Computations for Engineers

The sixth edition has been enlarged by the addition of a chapter on miscellaneous machinery covering steering engines, capstans, windlasses, boat cranes, anchor engines, ash hoisting engines, towing engines, ventilating, heating and cooling apparatus, sirens and whistles, fire extinguishing and fumigating apparatus, reducing valves and regulating valves. The book now covers the latest practice in both propelling machinery with their auxiliaries and the deck machinery used in the handling of a vessel and her cargo.

MISCELLANEOUS MACHINERY

- Steering Engines
- Capstans
- Windlasses
- Boat Cranes
- Anchor Engines
- Ash Hoisting Engines
- Towing Engines
- Ventilating, Heating and Cooling Apparatus
- Sirens and Whistles
- Fire Extinguishing and Fumigating Apparatus
- Reducing Valves
- Regulating Valves

1067 pages. The book is illustrated with 550 diagrams and cuts, showing the most approved practice in the different branches of the subject. The text is in such plain, simple language that any man with an ordinary education can easily understand it.

PRICE $6.00

FOR SALE BY

MARINE ENGINEERING, 6 EAST 39th STREET NEW YORK CITY

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Irving "Subway" Grating is described and illustrated in a 36-page catalogue issued by the Irving Iron Works Company, Long Island City, N. Y. This grating is stated to be especially valuable for use in steamship boiler and engine rooms, for stair treads and similar purposes. "Briefly summarized, Irving Subway offers the following exclusive advantages over any other form of grating or grating flooring: Maximum strength per unit of weight; minimum weight per unit of load and span; uniform distribution of load by truss construction; minimum deflection per unit of load and span; maximum lighting and ventilation area (80 percent of panel area); absolutely non-slipping surface; cannot become loose and rattly; oil or grease, ice or snow, age or wear do not impair its non-slipping qualities; minimum lodgment for dirt or solid objects; small size of individual openings (mesh) prevents passage of tools, etc.; wheels or rib-hooped barrels can be rolled over it in any direction without going through; its light weight means minimum weight and cost of the supporting structure; safe, comfortable and noiseless to walk or work upon; safe to work under, because nothing large and heavy can fall through it; openings for pipes, columns, etc., can be cut out without seriously impairing the strength of the panel; easily fitted into corners or formed in irregular shapes without impairment of strength; while affording maximum opening for lighting and ventilation, the depth of the bar members obstructs vision except when directly beneath; easily mounted or attached to any type of construction by means of specially devised fasteners—no drilling, no tapping, no bolts or screws needed."

Shipbuilding Cranes are described in Bulletin No. 40, just published by the McMyler Interstate Company, Bedford, Ohio. This is a handsomely illustrated catalogue of 50 pages. We quote as follows from the introduction: "This bulletin contains data and illustrations of various types of cranes in use in the shipbuilding industry. In order that this equipment will serve its purpose to the best advantage, it is necessary to properly co-ordinate the design, capacity, sphere of operation and speeds. This necessitates a careful study of yard layout and future extensions. The most efficient shipbuilding plant launches the greatest tonnage in equal periods of time per foot of shipbuilding ways, comparisons being based on work in the same classification. The data which is given in this bulletin is representative of present-day practice and can be accepted as an index to successful equipment for ship construction. The McMyler Interstate Company will appreciate every opportunity to confer with shipbuilding companies, naval architects and ship owners' repair docks in regard to crane requirements."

The Sprague Electric Dynamometer is described in Bulletin 48701-A, just published by the Sprague Electric Works, 527 West Thirty-fourth street, New York. "The Sprague Electric dynamometer is recognized as the standard laboratory equipment for the testing of internal combustion engines by manufacturers, technical schools and in United States Government experiment stations. Starting with one installation in 1906, several hundred Sprague electric dynamometers are to-day in use. They have played an important part in the development of automotive apparatus, not only for peace time uses but for uses in the great war. This bulletin is devoted specially to the Sprague electric dynamometer as applied to laboratory and production testing of automobile, truck, tractor, airplane and marine gasoline and kerosene engines. Some of the many other applications of the Sprague electric dynamometer are described in other bulletins. The Sprague electric dynamometer is a machine for measuring torque. The engine in test is coupled to the internally revolving rotor of the dynamometer, which transmits the full torque exerted by the engine to the external field or oscillating frame by electromagnetic interaction. The oscillating field frame is balanced on ball-bearing pedestals, and is restrained from revolving by the scales on which the torque is measured."

CONDENSER TUBES

324 MILES

In one month the Wheeler Tube Mill manufactured and shipped 879,900 lbs. of seamless drawn brass and copper condenser tubes.

Wheeler Condensers are known the world over.

It will pay to specify CRESCENT BRAND condenser tubes if you want tubes made by experts in condenser work.

WHEELER CONDENSER & ENG. CO.

CARTERET, N. J.

Manufacturers of Brass Goods; Brass and Seamless Copper Tubings; Plates; Sheets; Condensers; Centrifugal Pumps; Vacuum Pumps; Cooling Towers; Feed Water Heaters; Evaporators; Exhaust Relief Valves; etc. 33

Generated on 2024-09-12 08:35 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Special Shearing Equipment for the boiler shop is described and illustrated in a circular published by Joseph T. Ryerson & Son, Sixteenth and Rockwell streets, Chicago, Ill. "The Lennox rotary splitting shear, housing type, is designed for straight shearing of sheets and plates, but will also cut round, square or flat bars of a diameter or thickness corresponding to the capacity of the tool for plates. The blades are milled, making them self-feeding, and are reversible. The main frame is offset so that plates of any length may be split without distortion. The extended upper shaft carries a hold-down wheel to guide the plate and prevent it from tipping. This, together with the enclosed form cutter shaft, which operates at rest, materially assists the operator and makes unnecessary the use of a hoist and an extra helper. Machines are made in regular sizes of 4, 6 and 8 feet between housings. Special sizes can be furnished to order. The Lennox rotary bevel shear has long been recognized as a necessary part of the equipment of the modern boiler and tank shop, at the present time there being in use several thousand of these machines, embracing practically all of the principal boiler, tank, railroad, car and shipbuilding plants of the world. This machine will bevel all of the regular and curved sheets usually required in boiler and tank construction. It will bevel-shear in-and-out curves of segments, angles, and such difficult work as boiler heads after flanging, manhole saddles, dome sheets, and in addition will handle straight work in a small proportion of the time in which it can be done by hand or on a plate planer."

"Hercules" High-Speed twist drills and reamers are described in Catalogue 91 just issued by the Whitman & Barnes Manufacturing Company, Akron, Ohio. "Put a good man behind a 'W & B' and your combination can't be beat. With 'Hercules' (patented) high-speed twist drills and reamers, holes come fast and accurate in the hardest, toughest steel. The shipyards that produce the most good holes per drill and per dollar of drill cost regularly use 'Hercules' high-speed twist drills and reamers on bottom, keel and deck plates, stern posts and general heavy work. 'Hercules' twist drills have a collar larger than any other part of the drill—prevents dropping through a finished hole. They are hot twisted from special rolled alloy steel—keeps the original grain of the metal. Thin webs result in fast, clean work. 'Hercules' (patented) high-speed reamers keep pace with 'Hercules' twist drills. Other 'W & B' tools for shipbuilders include our three-lip ship plate countersinks, a fine set of spud wrenches in sizes ¼ inch to 1¼ inches; a full line of carbon and high-speed twist drills and reamers; a more complete line of screw and drop-forged wrenches than is shown by any other manufacturer, and many accessories. Send us your drawings and specifications for special drop forgings."

"Ball and Roller Bearings" is the title of an 18-page illustrated catalogue published by The Gwilliam Company, 253 West Fifty-eigth street, New York. Anyone interested in the subject should be sure to write for this catalogue, which will be sent to any of our readers upon request.

How to Stop Paying Toll for radio service is explained in a bulletin published by the Kilbourne & Clark Manufacturing Company, Seattle, Wash. "The Kilbourne & Clark plan of selling radio apparatus outright makes it possible for all users of radio equipment, large and small, on land and sea, to free themselves of the excessively expensive practice of having to pay toll for radio service. Toll costs for a comparatively short period will pay for a Kilbourne & Clark set; and once purchased the set is the property of purchaser to use as much or little as desired. That the Kilbourne & Clark plan is the economical and logical one is seen in the large number of Kilbourne & Clark sets which are being used by the different governments, large steamship lines and land stations. The plant behind Kilbourne & Clark apparatus is the largest in the world. The apparatus is so efficient that more than two thousand-mile service is common for the two kilowatt sets. If you are interested in obtaining efficient radio apparatus, and being able to purchase it outright, by all means learn what Kilbourne & Clark apparatus offers."

SCALE REMOVAL EASY

The antiquated time-consuming expensive method of removing scale with a hammer and chisel is unknown when boilers are treated with

DIXON'S PIONEER
BOILER GRAPHITE

It makes no difference whether the feed water is good or bad. Dixon's Boiler Graphite (fine flakes) acts upon the scale physically—not chemically—breaks up the cohesion between the particles of scale and their grip on the boiler tubes and sheets—in fact makes scale easy to remove.

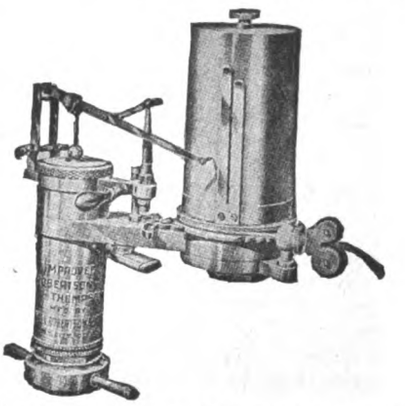
Do not confuse Dixon's Boiler Graphite with other boiler graphite. Write for booklet No. 75-T. It will show you how to lower your cleaning costs.

Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE COMPANY

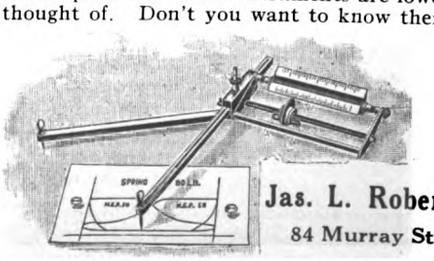
ESTABLISHED 1827

"Don't Let Them Tell You Different"



You can't feel your Engine "Pulse" without a good Indicator—Here's the Robertson-Thompson and the Willis Planimeter. THE A. B. C. WAY OF REALLY KNOWING to the absolutely accurate and direct figuring of diagrams. THEN YOU KNOW.

The prices for these instruments are lower than you ever thought of. Don't you want to know them?



Jas. L. Robertson & Sons

84 Murray St., New York

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

Wanted—Experienced Marine Engine Draftsmen, *Fabricated Ship Corporation*, foot of Twelfth street, Milwaukee, Wis.

Wanted — First-class hull draftsmen. Write, stating experience and length of service with former employers. Address *Manitowoc Ship Building Company*, Manitowoc, Wis.

Practical Marine Foreman and Engineer wishes connection with repair shop. Would act as foreman and invest $3,000 to $5,000. Locate anywhere. References. Address *Box* 66, care of MARINE ENGINEERING.

Wanted—First-class Marine Engine Draftsmen of shipyard in New York district, building 9,000-ton ships. Answer in full regarding age, experience and salary expected. *Marine Engine Draftsmen*, care of MARINE ENGINEERING.

Shipyard Manager, now in charge of eight-berth yard, desires change; over twenty years' experience, both coasts and lakes, familiar with all classes of work, good organizer and handler of men, highest references. Address *XYZ*, care of MARINE ENGINEERING.

Mr. General Manager, I am open for connection as Works Manager or General Superintendent. Continuous marine experience of sixteen years with all classes of merchant vessels in executive capacity with foremost pre-war shipyards. Forceful executive, pace setter, agreeable personality, leader of men, full knowledge of proper operation of all departments to obtain highest efficiency and lowest production costs. Your reply will be accorded strict confidence and personal interview expected. Will consider any locality except Southern and Gulf district. Address *Box 7A*, care of MARINE ENGINEERING.

Marine Engineer desires shore position as shore engineer or repair superintendent for shipping company, or shipyard position requiring chief's ocean unlimited license; twenty years' experience, shipyards and at sea. Address *Box* 7000, care of MARINE ENGINEERING.

Wanted—Technical Graduate familiar with Marine Engineering specifications, first-class marine engine, electrical and pipe draftsmen. Permanent positions for right men in shipyard near New York City. Address *Graduate*, care of MARINE ENGINEERING.

For Sale — One 13-inch General Electric type P. C. thirteen, twenty-ampere, one hundred fifteen-volt direct-current searchlight, complete with rheostat, overhauled and in A-1 condition. Three 67-foot and three 75-foot cargo booms in good condition. Address *Freeport Sulphur Company*, Freeport, Tex.

Shipbuilder, with 18 years' experience in leading yards and New York harbor work, seeks responsible position as designer or naval architect, or would act as consulting engineer to parties contemplating extension of present fleet. Address *Designer*, care of MARINE ENGINEERING.

Marine Oil Engines for Sale—Four 100-horsepower Fairbanks-Morse new oil engines; four 350-horsepower Diesel engines; two 500-horsepower Diesel engines; one 25-horsepower Fairbanks-Morse type "Y" crude oil engine. *Inland Navigation Company, Inc.*, St. Louis, Mo.

Foreman Loftsman, desiring change, wishes to connect with shipyard on Atlantic coast. Fifteen years' experience in largest shipyards as loftsman and shipfitter, eighteen months as foreman loftsman. Can qualify as foreman of shipfitters and assemblers. Address *Box* 103, care of MARINE ENGINEERING.

High-Class Engine Designer Wanted, also draftsmen, tracers and designers for structural and mechanical work on boats, derricks, etc. Good salaries and permanent position to the right men. Address *Chief Engineer, The Dravo Contracting Company*, Engineering Works Department. Pittsburgh, Pa.

Shipbuilder open for suitable position. Last employed as assistant hull superintendent. Has also been foreman of mold loft, also foreman shipfitter. Thoroughly conversant with latest methods of fabrication and erection. Address *Box* 4-*K*, care of MARINE ENGINEERING.

Designing and Detail Draftsmen—For permanent positions with large manufacturing concern in New England. Men with electrical, steam engine, turbine or special machine experience. Apply, giving age, experience, education and salary expected by addressing *Chief Draftsman, Box No.* 90-*X*, care of MARINE ENGINEERING.

For Sale at a Bargain, six used marine projector searchlights, complete with dispersion lenses and rheostats; 220-volt D. C. Carlisle & Finch Company's make. Form 1-M, plain hand-controlled, 14 inches. Have been in use for one year. Good as new. Make us an offer. *American Rolling Mill Company*, Middletown, Ohio.

Wanted—Shipyard Executive. Duties, general supervision with exception of office routine. None considered who had not received a salary in excess of $4,000 a year prior to 1914. Reply with full record, giving details of education, shipyard experience, salary expected, etc. Address *Box* 419, care of MARINE ENGINEERING.

Wanted—Several experienced mechanical draftsmen; preferably men who have had thorough experience in the designing of marine Diesel or steam engines of large sizes. State age, experience and salary expected; permanent position. Address *Electric Boat Company*, Groton, Conn.

Engineer, 25, college graduate, eight years' experience with all kinds of mechanical and electrical machinery, desires position in city as operating or efficiency engineer. Wishes to specialize at evening session of university. During the war was chief engineer of 15,000-ton ship. Address *Box* 325, care of MARINE ENGINEERING.

Position Wanted—Young man, 27, graduate of leading technical university, naval architect and marine engineering, now employed as hull foreman and general inspector for large ship building company, desires connection with marine insurance and brokerage firm or consulting naval architects and marine engineers. Address *Box* 705, care of MARINE ENGINEERING.

Engineer, 25, Marine, with scientific education, B. Sc. (M. I. T.). Has had varied experience in construction and design of steel and concrete ships. Has served in capacity of Assistant Outside Superintendent in large Government Navy Yard. Last employed as Engineer in construction for well-known concrete shipyard. Open for engagement with either steel or concrete shipyard, presenting the right offer. Anyone looking for a "Live Wire," address *Engineer*, care of MARINE ENGINEERING.

Mr. Manufacturer of Marine Equipment and Appliances, do you require a District Manager or Sales Engineer? One who has a thorough knowledge of shipyard requirements, ship construction and operation; one who has a large acquaintance among shipyards and steamship lines. Possesses good mixing qualities, good personality and selling qualities and experience of a character which will produce results. An untiring worker, master missionary and a hustler. Your reply will be given strict confidence by the *"Salty Salesman"* of MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

WANTED

MARINE SALES MANAGER

Real position open with one of the oldest and best established concerns in the Marine Steam Engineering Field. Equipment saves fuel and labor, increases speed and steaming radius. In use on hundreds of vessels, including majority of new Emergency Fleet.

Qualifications: Actual experience in marine steam engineering from both operational and sales end. Must have and be able to maintain close affiliations with ship-owners, managers and fleet engineers. Able to take charge of all marine sales in the east with office and headquarters in New York. Liberal salary and bonus.

Address:

ROBERT JUNE

Box 851 Detroit, Mich.

Draftsman Wanted:

To do tracing and copying. Must be a good letterer. State experience, salary expected, etc.

Tracer, care of Marine Engineering.

The Shipbuilders' Hand Book

by Harrison S. Taft

Price 15/-

For sale by

BENN BROS., Ltd.

8 Bouverie Street, London, E. C. 4

FOR SALE

Triple Expansion Marine Engine 18″ x 32″ x 54″—42″ stroke. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾″ stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company

Duluth, Minn.

FOR SALE

To reduce our stock of surplus war materials we offer for immediate sale the following:

Clear and Common Oak, 1″ to 12″ thick; 12′ to 40′ long.

Clear White Pine, ½″ to 3″; 6′ to 16′ long.

Spruce, Cedar, Mahogany, Ash, Elm, Long Leaf Yellow Pine,
Hackmatack Knees, all sizes.

Brass and Iron Marine Hardware, Woodworking Machinery.

If interested, apply promptly to

THE MATTHEWS COMPANY

PORT CLINTON OHIO

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Dressing Tools With the Bradley" is the title of a circular issued by C. C. Bradley & Son, Inc., Syracuse, N. Y. "For dressing tools and repair work the Bradley hammer is indispensable. This perfectly controlled hammer may be used for a vast range of work. Continuous service required by the shipbuilding industry—constant pounding on resisting surfaces—has no effect on the Bradley. Rubber cushions at the rear of the helve absorbs shock and helps to prolong life and maintain accuracy. If you wish a hammer for continuous forging send for particulars to-day."

"The Solution of Your Flanging Problems" is the title of a booklet just published by the McCabe Manufacturing Company, Lawrence, Mass. "A two-man flanging gang with the McCabe pneumatic flanging machine will turn out twice the number of flanged parts per day that the old style hand flanging gang will do. The McCabe pneumatic flanging machine occupies small shop space, and absorbs all the tedious, backbreaking work of hand flanging. With this sturdy tool in your shop, you need have no thought of important work being held up on account of workmen laying off. Sheet metal up to and including ½ inch in thickness is flanged cold with the McCabe. This eliminates lost time waiting for 'heats' and insures steady production. The McCabe is a self-contained unit, and can be moved from one job to another or from one part of the shop to another part."

Repair Part Insurance is the subject of a circular published by the Duntley-Dayton Company, Westminster building, Chicago, Ill. "Duntley-Dayton tools are designed to keep up the production and keep down the repair bills. He may have been a pessimist who coined the phrase, 'It isn't the first cost; it's the upkeep,' but he was an optimist who conceived the idea of so simplifying the construction of a pneumatic tool that its cost of maintenance would be reasonable. Simplicity of construction and durability are outstanding features to such an extent that investment in Duntley-Dayton pneumatic tools is a form of repair part insurance that goes with the purchase. You are invited to send for Bulletin No. 101, telling all about Duntley-Dayton hammers and other pneumatic tool accessories. You are also invited to send for Bulletin No. 102, which gives the prices of the repair parts—an important consideration in the selection of pneumatic tools. There is a chapter on the 'Care of Pneumatic Hammers' in this bulletin which is of interest to the man who pays the repair bills as well as the operator himself. You are also invited to send for Folder No. 104, entitled 'Hoseology'—a treatise on hose, hose couplings and hose clamp tools. And you are invited to send us your inquiries for pneumatic or electric tools of any description, and rivet sets, chisel blanks, grease and oil and other accessories."

"Little David" Air Tools are described and illustrated in Catalogue 8000, issued by the Ingersoll-Rand Company, 11 Broadway, New York. "The design is the most advanced of any gun made. The materials used are the best that can be obtained, carefully treated. The work produced by it cannot be bettered. It needs less attention from the repairman. Safety spring rivet set retainer an exclusive feature also. We make all other air tools."

Rich Tools are described and illustrated in a circular published by the Rich Tool Company, Railway Exchange, Chicago, Ill. "Locomotive, automobile, aeroplane, gun and machine parts, subject to maximum shocks of great frequency or torsional strains are first forged. Why? Because forging increases their physical properties, rearranges the structure to withstand stresses in any desired direction, and gives each portion the required amount of working. At the proper temperature the flutes of Rich tools are first forged and twisted. The result is a blank thoroughly uniform in every part and of superior physical properties to the bar from which it was made. Not welded, brazed or built up—made in one piece of the most suitable and best high-speed steel of the proper composition—every operation and process is conducted with care and judgment. It is unnecessary to tell you that this drill will produce maximum service—it is built for it."

Electric Arc Welding Equipments are the subject of several bulletins issued by the Westinghouse Electric & Welding Company, East Pittsburgh, Pa. "The three prime requisites of electric arc welding equipment are: 1. Sufficient potential capacity to sustain the arc when lengthened, for you have to overcome irregularities in the materials being welded, which causes variations in the resistance of the circuit; 2, in starting the arc the current should not shoot up too high, but should be above the normal welding current in order to give the necessary heat at the start; 3, constant heat at the arc. This requires variable voltage at the arc to maintain constant current, as the heat of the arc depends on the current flowing. The reason that variable voltage is required to maintain constant current is due to variation in the resistance of the arc path or circuit, due to the following: (a) Foreign matter, such as scale, rust, etc., in the path of the arc; (b) variation in the length of the arc, caused by the molten metal traveling from the electrode to the weld; (c) unsteadiness of the operator's hand, and (d) unevenness of the surface over which the welding arc is directed. Westinghouse electric arc welding equipments meet these requirements. Built in sizes from 150-ampere to 1,000-ampere capacity. 1. Single operator equipment—stationary type. 2. Single operator equipment—portable type. 3. Multiple operator equipment. Built for all commercial circuits, either alternating or direct current."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

NATIONAL ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 808 Vine St., Camden, N. J.

THE AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 127 Woodside Ave., Narberth, Pa.
Vice-President—W. A. Leavitt, Jr., New York Shipbuilding Corporation, Camden, N. J.
Secretary—B. G. Barnes, 1596 North Ave., Bridgeport, Conn.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.

NATIONAL MARINE ENGINEERS' BENEFICIAL ASSOCIATION OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Bienville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

INSTITUTE OF MARINE ENGINEERS, INCORPORATED
The Minories, Tower Hill, London.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

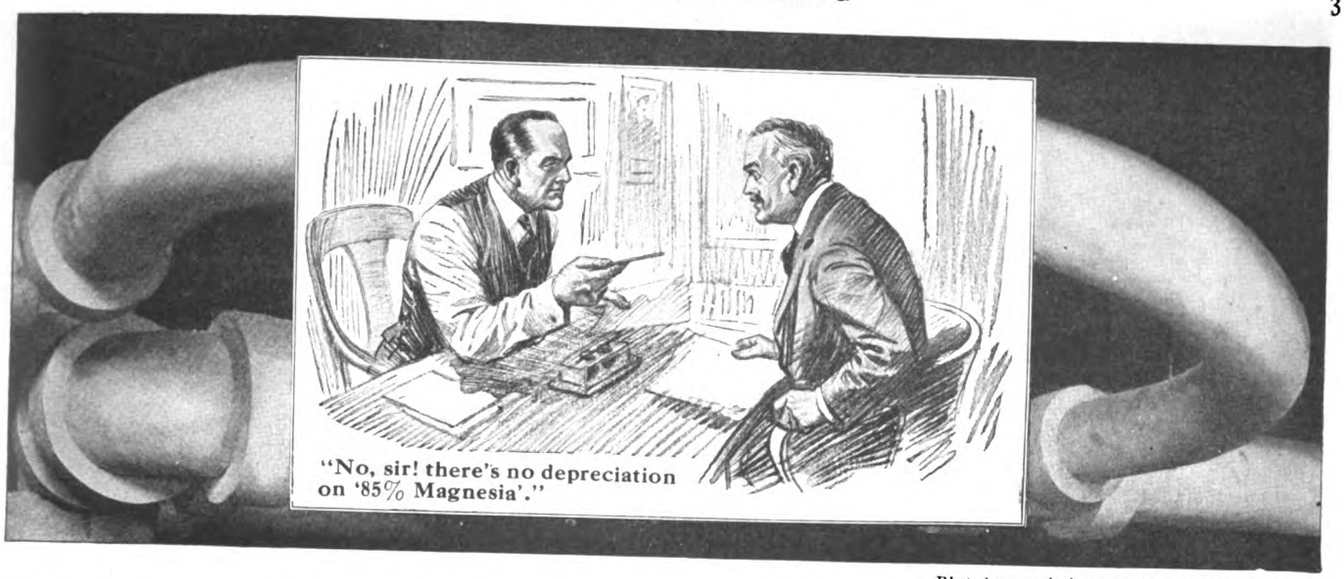


Photo by permission of Ordnance Dept., U. S. A

That's what the chief engineer told his president—

They were figuring on Depreciation of Equipment.

The engineer was saying, "Some fellow the other day was knocking our '85% Magnesia' pipe-coverings. So I wrote to W. A. Macan, Chairman of the Magnesia Association. He has been in the pipe-covering business for over 30 years and I wanted his straight experience. He says *there's no such thing as '85% Magnesia' depreciation.* Here's part of his letter:"

Time-proof—Usage-proof—Not Fool-proof

You can soak "85% Magnesia"—and it dries out as good as ever. You can hold "85% Magnesia" on a shovel over a fire till the shovel gets red-hot—and it isn't hurt. You can give "85% Magnesia" all the tremendous vibration of a locomotive—and it does not disintegrate.

But it isn't a concrete sidewalk for workmen to tramp on; nor a stone wall to bump with heavy ladders. Nobody but a fool would subject any cellular insulation to such ill-usage.

Indeed, if any pipe-covering does not crumble under heavy walking or heavy blows, it is a certain sign that it is lacking in the dead-air spaces which give it its real insulation value.

We invite specific questions on the durability as well as the efficiency of "85% Magnesia." The Engineers of the members of this Association, as well as the experts of the Mellon Institute who have been specially investigating pipe-coverings for three years, are at your service through our Committee. Send for our literature. Also for Specifications for the proper application of "85% Magnesia" compiled and endorsed by the Mellon Institute of Industrial Research of Pittsburgh University, which are furnished to Engineers and Architects on request.

85% MAGNESIA
UNIVERSAL COAL SAVER

MAGNESIA ASSOCIATION *of* AMERICA
721 Bulletin Building, Philadelphia, Penna.

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D. Crabbs	The Philip Carey Co.	Cincinnati, Ohio
Alvin M. Ehret	Ehret Magnesia Mfg. Co.	Valley Forge, Penna.
H. R. Swift	The Franklin Mfg. Co.	Franklin, Penna.
J. V. Mattison, Jr.	Keasbey & Mattison Co.	Ambler, Penna.

Copyright 1919, M. A. of A.—Permission to reprint by application

From a Veteran's Experience in "85% Magnesia"

"While it is a common practice to charge up each year a percentage of the cost of a plant for depreciation, in the case of "85% Magnesia" this is not necessary.

"Thus in the Niagara Power Station, '85% Magnesia' covering has been in service nearly twenty years; when recently a section and block of this '85% Magnesia' were analyzed and tested, it showed a depreciation after all those years of approximately 3%—so small that it could hardly be figured.

"Again, the Mellon Institute of Industrial Research of Pittsburgh University has on file many letters from Operating Engineers who have had '85% Magnesia' in service for ten years to twenty-five years stating that those coverings are as efficient today as when first placed in service.

"As long ago as 1888 Mr. J. J. DeKinder was a Consulting Engineer in Philadelphia, having the Pennsylvania Railroad among his numerous clients. A short time ago he wrote me:—

> "'I have specified '85% Magnesia' covering for a great many years, in fact, during all my active practice. I have used it under all procurable temperatures, and under all conditions that stationary and locomotive service furnish, and can recall *no time* in which it failed to render efficient service.'

"It may become soaking wet through steam-leaks, floods, sinking of a vessel, or any similar cause, not only once but several times, and when steam is turned on the boilers again, it dries out without shrinking or warping, and continues saving heat units just the same as it did before.

"I challenge anyone to give good evidence of any case where '85% Magnesia' properly applied and properly treated has failed to give maximum and satisfactory service through any inherent defect."

WM. A. MACAN
Chairman Magnesia Association of America

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

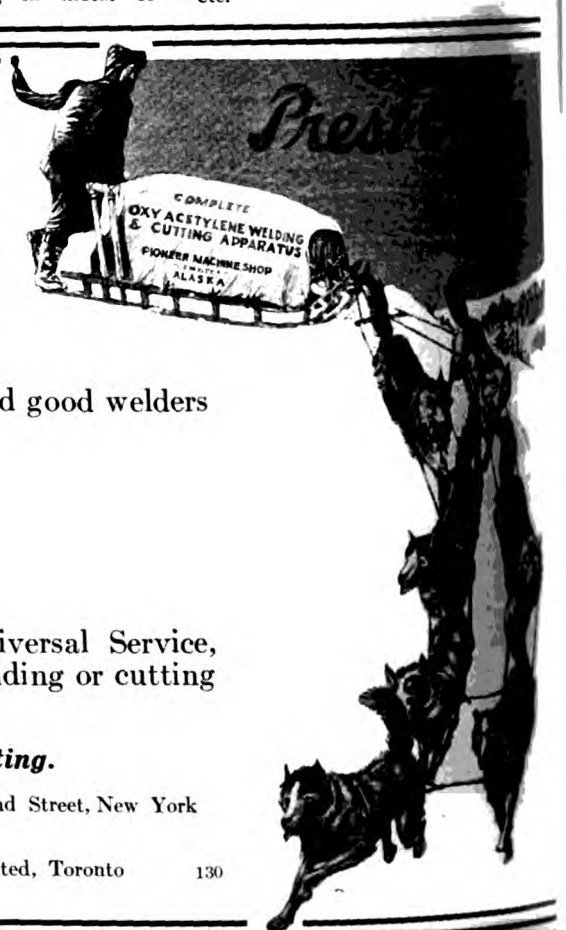
The Wayne Paint Oil Storage System for the storage and distribution of linseed oil and turbine, oil paints, etc., is described in Bulletin 70 published by the Wayne Oil Tank & Pump Company, 589 Canal street, Fort Wayne, Ind. "Paint oils, varnishes, etc., must be kept in evaporation-proof containers in order to maintain their original consistency and prevent waste. Storing these commodities in wooden barrels, faucet tanks or iron drums allows their evaporation, contamination with dirt and dust, waste and overmeasure, and in the case of linseeds, varnishes and paints allows the formation of 'foots and fats,' which render these liquids thick and unfit for use. The Wayne system of battery storage preserves these liquids in their original state, prevents evaporation and loss through over-measure, enables the keeping of a correct record of the amount received and dispensed. The equipment is practically fireproof. Tanks made in capacities of two barrels and up in battery form. Can be added to as needed, height and length from front to back of the entire battery remaining uniform, and width across front varying according to capacity, economizing floor space to the greatest possible degree."

The Thor "Perfect" Hose Coupling is described in a folder just published by the Independent Pneumatic Tool Company, 600 West Jackson Boulevard, Chicago, Ill. The new "Thor" Perfect Hose Coupling "is disconnected instantly by a straight pull on the knurled sliding sleeves. It is not even necessary to twist, as the bevel jaws separate as soon as the locking shoulder moves back. The bevel jaws and locking shoulders are heavy, with large bearing surfaces, and cannot bend, break, jar or work loose. Heavy, unbreakable sliding sleeves insure extreme durability. The operating spring is large and durable, but can be easily replaced, if necessary, by removing washer. A shoulder is provided on each hose end, so the new Thor hose clamp can be used. The L-shaped gasket is held in place by the air pressure when coupling is connected. It cannot be blown out when coupling is disconnected because of the bevel face on the gasket and protecting shoulder in the coupling. Gaskets are interchangeable in ⅜-inch, ½-inch and ¾-inch sizes. Gaskets in the 1-inch and 1¼-inch sizes are interchangeable."

Electric Air Compressors, Portable Electric Drills and Electric Valve Grinders are the subject of an illustrated catalogue just published by the Black & Decker Manufacturing Company, 105 South Calvert street, Baltimore, Md. The company's portable electric drills are described as follows: "These are high-class machine tools in every sense of the word. They are designed and constructed for drilling in metal or wood and are husky and serviceable throughout, having many exclusive features to recommend them especially. They are the result of years of experience in electric drill manufacture, and are thoroughbreds in performance as well as in appearance. The 'Pistol Grip and Trigger Switch,' which is patented, enables the operator to control the tool like an automatic pistol. This increases his efficiency and at the same time makes his work easier, as he can 'forget' the control, which is practically automatic, and devote his entire attention to guiding the tool. This reduces drill bit breakages, as, if the drill bit catches on a burr, or when it breaks through the work, the operator naturally tightens his grip, instinctively pulling the trigger and stopping the drill. There is no danger of the drill sagging on the bit when the switch is being operated, as the mechanic does not have to change the position of his hands in the slightest degree. This also lessens the risk of inaccurate centering in starting."

Electrical Goods are described and illustrated in a sectional catalogue just issued by Edwards & Company, 140th and Exterior streets, New York. This company makes a specialty of marine electrical work, and anyone interested in the subject should send for a copy of this catalogue, which describes marine signals, annunciators, watchmen's clocks, fire alarm apparatus, push buttons, door openers, bells of all kinds, etc.

Here's Proof of "The Universal Service"



ALASKA or Atlanta—no matter where you do business—you'll find one of the 40 Prest-O-Lite Plants and Warehouses your best and handiest source of acetylene supply.

Wherever repairs are needed, there you will find good welders using and depending upon

Prest-O-Lite

DISSOLVED ACETYLENE

Prest-O-Lite, the Universal Gas with the Universal Service, goes wherever you can go; does any kind of a welding or cutting job for the least time and money cost.

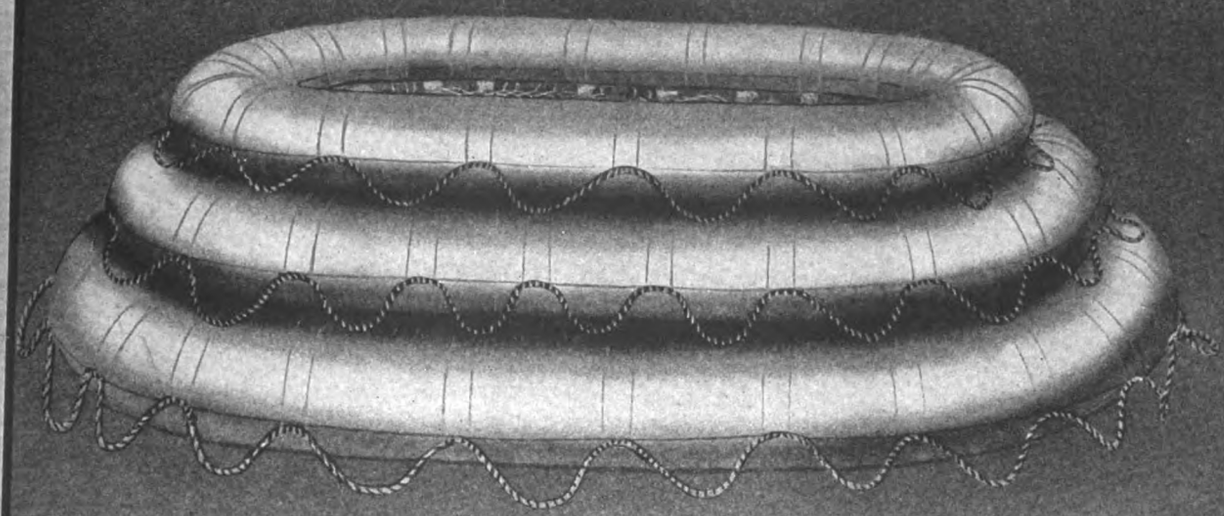
Write for the Service Plan, It's Interesting.

THE PREST-O-LITE COMPANY, Inc., General Offices, 30 East 42nd Street, New York
Kohl Building, San Francisco
In Canada, PREST-O-LITE COMPANY OF CANADA, Limited, Toronto 130

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. 50 E. 42nd Street, New York

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Spraco" Air Washing and Cooling Equipment for steam turbine generators and other electrical machinery is described by the Spray Engineering Company, 93 Federal street, Boston, Mass., in Bulletin 257. "With the advent of the modern, horizontal, high-speed generators, the matter of the proper ventilation of same has become of great importance. The heat losses per unit of surface or of active weight are relatively much larger than in the older machines, making forced ventilation essential. The amount of air required varies with the size and type of the generator, some of the later and larger models using less air per K. V. A. on account of their higher efficiency. The necessity of properly conditioning the ventilating air is now recognized by engineers as secondary only in importance to the securing of an ample supply of air. The air should be cleansed of all dirt, cooled and humidified. To accomplish this in an efficient manner, a water-spray type of air washer and cooler has been found to be the best device. The Spray Engineering Company, pioneers in the design and manufacture of washers essentially for power-plant service, has developed and perfected the well-known Spraco air washing and cooling equipments, used almost universally in this country and abroad."

Ross Condensing Equipment, with Croll-Reynolds Evactor Air Pump, is the subject of Catalogue "C," just published by the Ross Heater & Manufacturing Company, Buffalo, N. Y. Many advantages are claimed, besides which "there are no valves or pistons to require constant attention. There are no moving parts. There is no noise, pounding or hammering. The Evactor requires little attention and no repairs, as compared to the reciprocating dry air pump or the hydraulic air pump, which were formerly in vogue before our evactors were perfected. No power plant needs to burden itself with the old-style vacuum pump—so expensive in its first cost—so sure to cause endless repairs and attention—so certain to show rapid dropping-off in efficiency."

Badger Self Equalizing Expansion Joints are described in Catalogue 18, published by E. B. Badger & Sons Company, 63 Pitt street, Boston, Mass. "Self-equalizing expansion joints distribute stress uniformly. This is an advantage that cannot be emphasized too strongly. The equalizing rings and lip on flanges limit the amount of compression on each corrugation; (first) insuring undue strain on any part; (second) high factor of safety, from standpoint of strength. Corrugations on joints 6 inches and over, 2¼ inches deep; corrugations on joints under 6 inches, 1⅛ inches deep. There is no cracking, jamming or pipe distortion, because of the scientific design. There is no stuffing box or sliding member. Badger joints are dependable under all pressures."

"Making Air Work" is the title of a booklet issued by the B. F. Goodrich Rubber Company, Akron, Ohio. "Your air drills and hammers are the hardest working agents in the shipyard to-day. And the air that makes them work costs nothing, yet without compressed air and the hose that conveys it modern shipbuilding could not be. Your pneumatic hose must be strong, light, flexible, easily portable, kink-free and able to stand the worst abuse of men and machines. Your hose should be Goodrich hose, which possesses all these merits and more. Goodrich hose helped make shipbuilding records on the East and West coast last year. Write for the facts."

Texaco Bunker Oil and Texaco Diesel Engine Fuel are described by the Texas Company, 17 Battery Place, New York, in a booklet just published. The foreword reads as follows: "When the allied navies cried for oil—and more oil—the Texas Company realized its responsibilities fully and extended its shipping and bunkering facilities as rapidly as the restricted construction situation would permit. Now that building restrictions have been removed, we are rushing to completion more stations, so that the merchant marine of the world may now call at practically every port on the Atlantic and Gulf coasts and secure Texaco Marine Fuel Oils and Texaco Marine Lubricating Oils. This brief pamphlet tells you what they are and where to get them."

IRON STEEL METALS

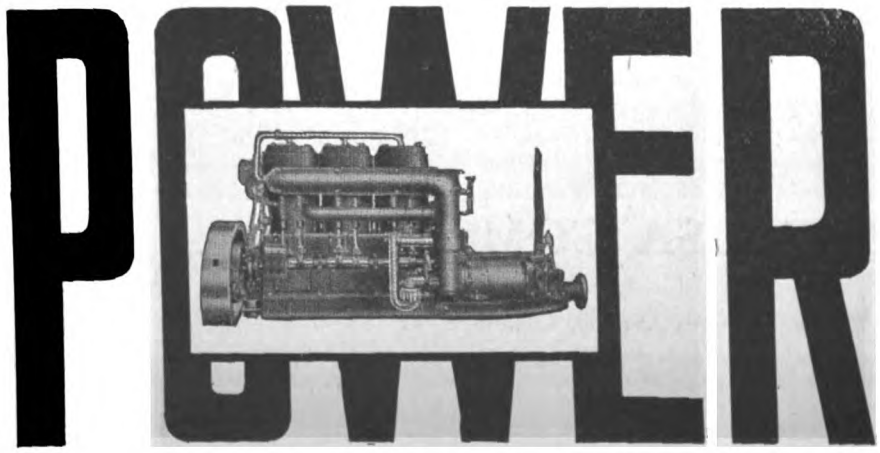
ARTHUR C. HARVEY CO.

374 Congress Street Boston, Mass.

Tel., Main 7000

BOILER TUBES, RIVETS, PLATES, TANK STEEL, FLOOR PLATES, BARS, SHEETS, STRUCTURAL SHAPES, COLD ROLLED SHAFTING.

WE ARE EQUIPPED TO CUT TO SIZE ANYTHING CARRIED IN STOCK.



WOLVERINE

"The Motor With the Bore & Stroke"

PLUS FUEL COST REDUCED

From 70 to 80 per cent without sacrificing reliability, flexibility or control. Perfect combustion on kerosene or lowest grade of Coast Distillate.

5 to 200 H. P. — 1 to 6 Cylinders

Ask for Catalog 73.

WOLVERINE MOTOR WORKS, Bridgeport, Conn.

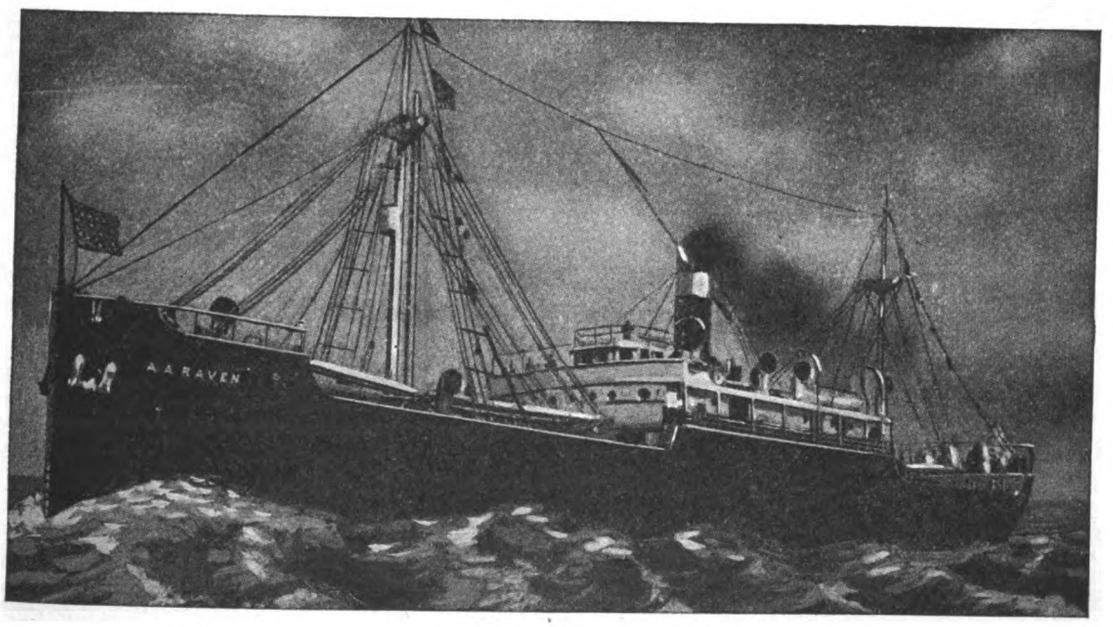
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ANTONIO C. PESSANO, CHAIRMAN OF BOARD
JOHN R. RUSSEL, PRESIDENT
H. W. HOYT, VICE PRESIDENT & TREASURER
J. A. UBSDELL, VICE PRES. & GEN'L MANAGER
F. G. MORLEY, SECRETARY

Great Lakes Engineering Works

Steel Ship and Engine Builders

Detroit, Michigan, U. S. A.



Over sixty steel ships have been built by us for over sea trade and forty-eight are now under construction.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Why the Terry Leads in the Small Turbine Field is the subject of a bulletin published by the Terry Steam Turbine Company, Hartford, Conn. "It's the Terry feature by which the steam is used several times in a single row of internal buckets instead of a number of bucket rows or wheels. This invention, by returning the steam to the wheel again and again until its capacity for work is completely exhausted, gives high economy at low as well as high rotative speeds. A patented 'efficiency chamber' insures that none of the steam will pass to the exhaust before its energy is completely spent. The power-producing action of the steam in the wheel buckets takes place entirely on the curved surfaces at the back of the bucket. As the only function of the blades is to split the steam jet, close blade clearance is not necessary, and wear of blades is of little consequence. With this construction, turbines will maintain their original efficiency for years. The Terry wheel, made from solid steel, with buckets milled in the edge, is as simple and trouble-proof as a wheel could be. The reduction in rim weight and decrease in blade stresses incidental to the removal of useless metal at the center of the blade permit safe operation at high speeds, with resulting high efficiency. The use of the single wheel permits short shaft span, so that there is no danger of the wheel reaching the dangerous "critical speed" in operation. The Terry wheel as now built cannot burst and injure the operators."

Machine Tool Motors are the subject of Bulletin 4102, published by the General Electric Company, Schenectady, N. Y. "Adjustable speed machine tool motors should require no complicated protective or control devices; must show no destructive sparking throughout a wide range of speeds under sudden and extreme peak loads or dynamic braking, must show stable operation at any speeds desired throughout a wide range and easily withstand sudden strengthening of the field while operating at weakened field. These requirements have been met for several years by RF motors under the severe conditions imposed by the world war upon American industry. The rigid, get-at-able, oversize construction of these motors, their dependable oiling devices, removable shafts and many other mechanical features contributed to assure a remarkably dependable operation. Our Bulletin No. 4102, 'RF Adjustable Speed Motors,' will give you fullest details. Our specialists will be pleased to send you full information on these motors."

The New Flexible Marconi Plan is the subject of a circular published by the Marconi Wireless Telegraph Company of America, Woolworth building, New York. "Ship owners whose Marconi-equipped vessels are returned by the Government can now shift the burden of maintenance and operation to our experienced shoulders—they can contract with us to operate their wireless equipment. This is made possible by the flexibility of the new Marconi plan—a three-way plan, which includes rental contract with service, or sale outright, or sale with service. Under any of these arrangements the ship owner secures Marconi apparatus, and where service is contracted for he gets the complete co-operation of the entire Marconi organization, world-wide in its scope. This service—already in operation—is available now. Our nearest office will prove to you how it saves money, time and endless trouble."

"Little Giant" Air Drills are described and illustrated in Bulletin [illegible], published by the Chicago Pneumatic Tool Company, 1044 Fisher building, Chicago, Ill. "Bethlehem steel is one of hundreds of users the world over who are minimizing drilling, reaming and tapping costs with Little Giant portable air drills. A shop equipped with Little Giant ball bearing air drills is always protected from experiment and defective portable drill design. For twenty-one years the Chicago Pneumatic Tool Company has been known as the pioneer in pneumatic tool progress. In the Little Giant line of portable air drills are embodied the results of a world-wide experience in meeting shop requirements. Little Giant air drills have never been surpassed in work accomplished, economy of air consumption and durability of parts. They are made in a wide variety of sizes and styles to meet every need in drilling, boring, reaming, tapping and screw-setting operations."

REG'D TRADE MARK

INTERNATIONAL
COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS
In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually
Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING
INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N.Y.

IMPORTANT NOTICE TO SUBSCRIBERS
Our subscribers are requested to notify us immediately whenever they change their address. Otherwise they cannot keep their files unbroken. If subscribers move without notice to us, we cannot duplicate numbers already sent to their old addresses, as many times they are out of print.
MARINE ENGINEERING 6 EAST 39th STREET, NEW YORK

VALK & MURDOCH COMPANY
CHARLESTON, S. C.
Builders of Marine Boilers, Scows and Lighters

8,000-Ton Floating Drydock	1,500-Ton Marine Ry.	500-Ton Marine Ry.
Length on Blocks 440′	Length on Blocks 220′	Length on Blocks 100
Depth over sill 22′	Depth over Blocks 14′	Depth over Blocks 7

Marine Repairs a Specialty

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sun Marine Oils

HAVE PROVED THEIR WORTH

QUALITY SERVICE

RELIABILITY EFFICIENCY

Good Ships deserve Good Oils

Let our engineers solve your engine room troubles

SUN COMPANY

1428 So. Penn Square - - - PHILADELPHIA, PA.

STOCKS CARRIED AT

New York City Boston Philadelphia Baltimore Pittsburgh Cincinnati Buffalo St. Louis
Chicago Minneapolis Toledo Newark Newport News Detroit Atlanta New Orleans Sabine

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Coppus Centrifugal Turbo Boiler Feed Pump is described in a catalogue just published by the Coppus Engineering & Equipment Company, Bristol, Mass. "In our Type CCC turbo boiler feed pump the pump is designed specifically for the purpose of forcing hot water into a boiler against steam pressure, and the steam turbine is built to drive this pump. We do not use an ordinary high-pressure pump which can be employed for any other purpose, and therefore we are in a position to choose exactly the proper materials with regard to the high temperature of the feed water and also to use the most rugged construction on account of the severe uses to which the boiler feed pump is subject. The same holds true for the steam turbine. After once deciding upon the most efficient design with regard to steam consumption our only purpose was to develop a steam turbine in which self-contained construction and absolute reliability of operation were the main characteristics."

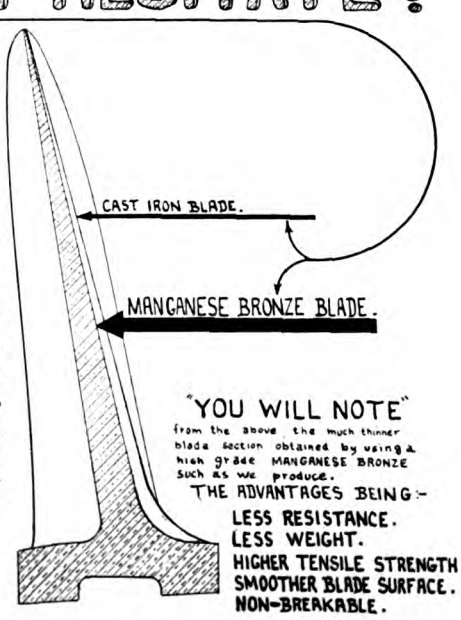
The P & W Turntable Lathe is described in a special catalogue just published by the Pratt & Whitney Company, 111 Broadway, New York. "The cross-feeding turntable slide is one secret of its success. In the handling of castings and forgings, this distinctive feature—the cross-feeding turntable slide with transverse stops—lends itself to the unlimited requirements of boring, facing and turning operations with the simplest tool equipment. Cross-feed in either direction is provided by hand or by six power feeds. Eight cross-slide stops can be adjusted to any desired position or combination. A micrometer dial attached to cross-feed hand wheel assures accurate traversing of cross-slide, and allows of setting the stops in desired relation one to the other, with accuracy and dispatch. The P & W 2½ by 26-inch Turntable Lathe has other distinctive advantages fully described in special catalogue. If you are interested in high production manufacture of duplicate parts write us to send you a copy."

Timed Lubrication is the subject of Engineering Bulletin S-60, published by the Richardson-Phenix Company, 120 Reservoir avenue, Milwaukee, Wis. "Not the quantity but the method of application determines the efficiency of lubrication of heavy oil marine engines. Timed lubrication—a drop of oil at each piston stroke, at the exact time and place where it is least affected by the heat of explosion—can be obtained only by using the Richardson Model 'M' sight feed oil pump. Nothing like this feature of timed lubrication can be obtained from any other lubricator than the Model 'M.' And timed lubrication is absolutely necessary for the efficient lubrication of heavy oil engines. The successful operation of a heavy oil-burning engine depends to a large extent on efficient lubrication. The Richardson Model 'M' and timed lubrication are worth your immediate investigation."

Punching and Shearing Machinery is described by the Hilles & Jones Company, Wilmington, Del., in a catalogue just issued. "Carefully worked out designs and with sufficient reserve capacity providing for an ample margin of safety, make sure of our product meeting all requirements. We make machine tools for working plates, bars and structural shapes; rotary bevel shears; plate bending rolls; plate straightening rolls; sheet levelers; flanging clamps; plate scarfers; beam copers; angle planers; plate planers; joggling machines; angle bevelers; rail straighteners."

"Why Parkesburg Charcoal Iron Boiler Tubes?" This question is answered as follows in a bulletin issued by the Parkesburg Iron Company, Parkesburg, Pa.: "A cold blast of air directed on a hearth charged with charcoal and iron ore produced the first iron. This iron was practically pure. The same process, although the charge has varied, is followed to-day by the Parkesburg Iron Company. The result is the same high-grade iron as of old. For boiler tubes this iron is ideal. It is fibrous, will not crystallize under shock or vibration, is ductile, can be easily and securely beaded, requires little calking and is pre-eminently weldable. Charcoal iron is non-corrosive and resists pitting. Boiler tubes of charcoal iron are more dependable and durable than steel, while the ultimate cost is much less."

"WHY HESITATE?"


CAST IRON BLADE.
MANGANESE BRONZE BLADE.
"YOU WILL NOTE"
from the above the much thinner blade section obtained by using a high grade MANGANESE BRONZE such as we produce.
THE ADVANTAGES BEING:-
LESS RESISTANCE.
LESS WEIGHT.
HIGHER TENSILE STRENGTH.
SMOOTHER BLADE SURFACE.
NON-BREAKABLE.

MORAL.
If you want STRENGTH use Manganese Bronze . . .
If you want the STRONGEST, use . . . . .
S.M.B. Brand
. . . . . .

WE HAVE MADE

PROPELLERS

FOR MANY OF THE

LEADING SHIPYARDS

WE ARE EQUIPPED TO HANDLE THE LARGEST PROPELLERS DESIRED, AND ALSO TO SUBMIT PRICES ON

PROPELLER PATTERN MACHINING DESIGNING

AMERICAN MANGANESE BRONZE CO.

HOLMESBURG, PHILA., PA.

(*MANUFACTURERS OF SPARE'S BRONZES*)

Generated on 2024-09-12 08:12 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

New Jersey Zinc

The world's standard for Zinc products

ZINC PLATES

Our numerous mines yield such a comprehensive variety of zinc ores that we are able to exactly meet every zinc requirement.

Our rolling mills at Palmerton, Pa., are now prepared to furnish zinc ship plates and boiler plates of any desired dimensions and thicknesses and of just the right quality to best serve their purpose.

This organization with its extensive resources and its seventy years of experience in the development and production of zinc products, has unusual advantages in meeting the needs of the ship building industry.

An interesting exhibit of the products of the New Jersey Zinc Company will be shown at the Chemical Exposition, Chicago, September, 22nd to 29th.

THE NEW JERSEY ZINC COMPANY, *160 Front Street*, New York

ESTABLISHED 1848

CHICAGO: Mineral Point Zinc Company, 1111 Marquette Building

PITTSBURGH: The New Jersey Zinc Co. (of Pa.), 1439 Oliver Building

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The "Gaskette" Roll, made by the General Asbestos & Rubber Company, Charleston, S. C., is the subject of an illustrated circular the company has just published. "Don't wait till you need gasket material in a hurry—don't risk holding up a mighty important repair job while you send out and get a cut-piece of sheet packing. Prepare now—stock Garco Gaskette Roll to-day. Never before have you been able to buy high-grade, wire-inserted asbestos sheet packing in convenient, ready-to-use form like this. Never before have you been able to get it, cut 10 inches wide by 40 inches long—ready for the dozens of jobs where this size just fills the bill. Now you can keep in stock just the quantity you need—know that it is fully protected from dust and dirt—know that you are prepared for every emergency. Garco Gaskette Roll is the newest, biggest item in the complete line of highest quality Garco asbestos products. It is made of high-grade, long-fiber asbestos, thoroughly reinforced by an interwoven network of strong, fine wire. It is treated with Garco Special Waterproofing Compound—finished red on one side, graphite the other. Gaskets made from Gaskette Roll are guaranteed for the highest pressure or temperature ever met in steam or gas engine service. Make up your mind now to stock Garco Gaskette Roll. Ask your jobber for prices or write us direct for full information. The same high-grade Garco Sheet Packing also sold under Garco-bestos Brand in full rolls of 250 pounds and half rolls of 125 pounds, 40 inches wide, all standard thickness."

Drop-Forged Machinists' Tools are described in a booklet just published by J. H. Williams & Company, 63 Richards street, Brooklyn, N. Y. This company's "Agrippa" tool holders are described as follows in the catalogue: "Unusual precautions have accompanied the development of this line of holders. Every detail has been tested and given closest possible attention. Materials best adapted to each of its parts have had every consideration and variety of test. The design, with the thought of its fullest utility and non-obstructive character, has had abundant and purposeful care. The holders or shanks, all drop-forged from a strong, tough grade of carefully selected steel, are submitted to a special heat treatment or refining process, after forging, which develops resistance to all wear and the great strength necessary to overcome the pushing thrust imposed upon the cutters. The cutter-holding channel provides an unusually strong seat for cutter and great resisting qualities for the work imposed upon this portion of holder—a fundamental requirement in tool-holder efficiency."

Sperry Service is the subject of a bulletin published by the Sperry Gyroscope Company, Brooklyn, New York. "You never let go your anchor far from Sperry Service. Offices are maintained in New York, Cleveland, London, Tokio, Paris, San Francisco, Milan, Copenhagen, Stockholm, Boston and Yokohama. It is always possible to arrange by wireless for a Sperry engineer to inspect or adjust your gyro-compass. So perfect is the Sperry service organization that it is as easy to have your gyro-compass cared for as to obtain the help of a magnetic compass adjuster. For the first year after the installation of the gyro-compass Sperry service is free. After that the cost is nominal. There is but little need for any service on the gyro-compass other than occasional lubrication or inspection by your ship's electrician."

Economy Tiering Machines and Barrell Storage Racks are described in a bulletin published by the Economy Engineering Company, Chicago, Ill. "There is hardly an industry that does not have, in some way or other, an urgent need for the Economy System of storage and handling of heavy, bulky packages. The accompanying pictures visualize the application of this system to several different lines of business. The Texas Company has told the whole story of the Economy System in a few words, as follows: 'The Economy System has practically doubled our warehouse capacity, and the arrangement is such that every barrel may be easily reached. We are also handling our warehouse with the minimum amount of labor.'"

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

STRATFORD SPECIAL NO. 1 MARINE OAKUM
receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. It meets the requirements of all of the United States Government specifications. For years we have guaranteed the quality of each bale to be standard of excellence and returnable at our expense if otherwise. More of this grade Oakum has been used by the United States Government and its contractors than all other makes combined, yet, not a single bale has been condemned or rejected, whereas it has replaced the condemned Oakum of almost every other make. Our experience, quality and service are worth more to you than we ask.
GEORGE STRATFORD OAKUM COMPANY Jersey City, N. J.

WE ARE SPECIALISTS IN
TAPERED OR BEVELED LINERS OR FILLERS FOR SHIPS
IRVING IRON WORKS COMPANY, LONG ISLAND CITY, N. Y.
MAKERS OF IRVING'S SUBWAY GRATING (TRADE MARK) THE RETICULATED KIND

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SEVENTH EDITION

PRACTICAL MARINE ENGINEERING

REVISED AND ENLARGED

By Rear Admiral C. W. Dyson, U. S. N.

This book is devoted exclusively to the practical side of marine engineering and is especially intended for engineers and students and for those who are preparing for examinations for marine engineers' licenses for all grades. It gives complete details regarding marine engines and all that pertains to them, together with much information regarding auxiliary machinery. It covers the general subject of calculations for marine engineers and furnishes assistance in mathematics to those who may require such aid.

Boilers, reciprocating engines, steam turbines and reduction gears (mechanical, hydraulic and electric), are treated exhaustively. A separate chapter deals with internal combustion engines (Diesel and heavy oil) and producer gas plants. Oil fuel burning and the latest practice in superheated steam are taken up in detail.

The chapter headings include the following:

MATERIALS
- Fuels (coal and oil)
- Boilers (Fire tube and water tube)
- Oil Fuel Burning
- Marine Engines
- Reciprocating Engines
- Steam Turbines
- Internal Combustion Engines
- Gasoline
- Heavy oil (Diesel)
- Producer Gas

AUXILIARIES
- Pumps
- Condensers
- Feed Heaters
- Filters
- Evaporators
- Lubricating Devices
- Separators
- Blowers
- Pneumercators
- Time Firing Regulators
- Steam Traps
- Ash Ejectors, etc.

- Valves and Valve Gears
- Refrigeration
- Electricity
- Propulsion and Powering
- Operation, Management and Repairs
- Boilers, Engines, Turbines and Auxiliaries
- Indicators and Torsion Meters
- Special Topics and Problems
- Computations for Engineers

The sixth edition has been enlarged by the addition of a chapter on miscellaneous machinery covering steering engines, capstans, windlasses, boat cranes, anchor engines, ash hoisting engines, towing engines, ventilating, heating and cooling apparatus, sirens and whistles, fire extinguishing and fumigating apparatus, reducing valves and regulating valves. The book now covers the latest practice in both propelling machinery with their auxiliaries and the deck machinery used in the handling of a vessel and her cargo.

MISCELLANEOUS MACHINERY

- Steering Engines
- Capstans
- Windlasses
- Boat Cranes
- Anchor Engines
- Ash Hoisting Engines
- Towing Engines
- Ventilating, Heating and Cooling Apparatus
- Sirens and Whistles
- Fire Extinguishing and Fumigating Apparatus
- Reducing Valves
- Regulating Valves

1067 pages. The book is illustrated with 550 diagrams and cuts, showing the most approved practice in the different branches of the subject. The text is in such plain, simple language that any man with an ordinary education can easily understand it.

PRICE $6.00

FOR SALE BY

MARINE ENGINEERING, 6 EAST 39th STREET NEW YORK CITY

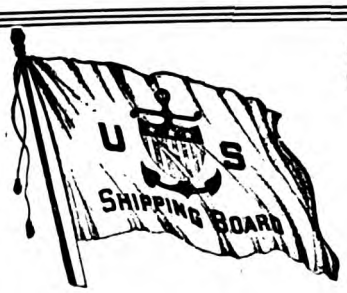
Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Advantage of the "Cleco" Pressure-Seated Air Valve are set forth in Bulletin No. 41, just issued by the Cleveland Pneumatic Tool Company, Cleveland, Ohio. "Has but three parts —body, valve plug and handle. No packing required—has air-seated valve plug. Unrestricted inlet opening—equals the area of outlet. Has no angle turns in air channel as in other types. Air pressure is always on large end of valve plug, holding same firmly on valve seat. Provided with waste arrangement when valve is closed. Made in following sizes: ⅜-inch, ½-inch, ¾-inch, 1¼-inch, 1½-inch and 2-inch outlets. Inlets one pipe size larger. Standard pipe threads; valve shown in cut at left has female Bowes coupling outlet, and connects with sizes ¼ to ¾, inclusive. The Y-fittings illustrated permit the use of two air tools on one main line hose; these fittings are convenient for the boiler maker when working inside of the boiler, as the operator can turn on or shut off the air without leaving his work, which is a great convenience. Style D. Y. F. has two valves, and permits of independent air control, allowing two operators to run tools at one time. Style D. Y. M. has one valve control for one operator, using the two air tools alternately. Both fittings have Bowes coupling inlets and outlets, and connect with couplings sizes ¼ inch to ¾ inch, inclusive."

The Oxy-Carbo-Hydrogen process of cutting steel and wrought iron is described in an illustrated catalogue of 26 pages, published by the Carbo-Hydrogen Company of America, Benedum Trees building, Pittsburgh, Pa. "Recognizing the need of service to customers and instructions in the proper use of the Oxy-Carbo-Hydrogen process in the cutting of steel and wrought iron, the Carbo-Hydrogen Company from the beginning has maintained an efficient staff of demonstrators for this work. Our service men made regular trips throughout the different territories to see that all Carbo apparatus is properly operated, and make minor repairs that may be necessary from time to time on this apparatus. We are always glad to cooperate with our customers in devising new ideas for the use of the Carbo-Hydogen process and to help them in reducing their costs of operation."

"Have You Considered the Importance of Good Riveting?" Catalogue 8000, published by the Ingersoll-Rand Company, 11 Broadway, New York, gives much information on the subject of good riveting. "First, what is meant by good riveting? Good riveting means that the holes are well filled with metal, that the heads are of the proper shape and centered over the shank, and that the rivet should be tight. The matter of centering the heads depends upon the way the workman holds the hammer; the axis of the hammer should coincide with that of the rivet, as the workman is holding in the illustration. A well-filled hole and tight joint, however, are obtained by the use of the proper hammer. 'Little David' riveting hammers are made in a number of sizes and styles. They are guaranteed to give a well-filled hole and tight joint, and are particularly suited to the exacting conditions of boiler making. A majority of the largest manufacturers of Scotch marine boilers have adopted 'Little David' hammers as being the most efficient for this kind of work. You will find them most efficient for your work, however difficult. Let us send you more information regarding our pneumatic tools. Ask for Catalogue 8000."

Shipyard Air Tool Service is the subject of Catalogue 8000, published by the Ingersoll-Rand Company, 111 Broadway, New York. "Shipyard air tool service has its beginning in supplying you with air tools of the highest quality and of just the right size. Little David tools are sturdy, powerful and simple in design, easy to operate and maintain. They are built in a wide range of sizes and styles to meet your requirements in the most economical way. But our interest in your equipment does not cease when the tools are delivered. The services of a pneumatic tool expert are at your call, and a nearby warehouse will promptly supply your wants in tools, parts or fittings. Little David is not only the name of a superior line of pneumatic tools; it is the name of a service as well."



SHIPBUILDING PLANT FOR SALE

United States Shipping Board Emergency Fleet Corporation

Invites Proposals for the Purchase of

Shipbuilding Plant, Raymond, Washington

Operated by

Sanderson & Porter

This shipyard is located 11 miles from Willapa Harbor on the Chicago, Milwaukee & St. Paul R. R., with switching connection to the Northern Pacific R. R., and has been one of the very efficient shipyards in the Northern Pacific District in the building of wood ships of 3500 D. W. T. capacity.

Detailed inventory, blueprints and photographs and other data of said shipyard have been filed in the office of the District Manager, 607 Securities Building, Seattle, Washington; in the office of the Manager of the Shipyard Plants Division, Emergency Fleet Corporation, 140 North Broad Street, Philadelphia, Pa.; and at the yard; and the same may be inspected by prospective bidders during business hours. Copies of a description of the yard and abstract of inventory may be obtained on application to any of the above and deposit of $10.00 to guarantee return.

Sealed bids will be received until 11 o'clock A. M., Sept. 10, 1919, by the United States Shipping Board Emergency Fleet Corporation, at the office of the District Manager, 607 Securities Building, Seattle, Washington, or at the office of the Manager of the Shipyard Plants Division, 140 North Broad Street, Philadelphia, Pa., for the sale of the said Corporation's Shipbuilding Plant at Raymond, Washington, including the tools and equipment thereof, said plant being now operated by Sanderson and Porter. One of the proposals will be accepted, or all rejected, within forty-five (45) days of that date.

Bids must be submitted in duplicate, on standard proposal forms, made in the manner designated therein, and enclosed in sealed envelope marked "Proposal 8005 to be opened at 11 A. M., Sept. 10, 1919." Proposal forms may be obtained from any of the offices designated above.

Bids must be accompanied by a certified check on a National Bank, payable to the United States Shipping Board Emergency Fleet Corporation, for 10% of the amount bid. This amount will be applied upon the purchase price to be paid by the successful bidder, but in the event that such bidder fails to consummate the contract of purchase, the deposit will be forfeited to the Corporation. The balance of the purchase price is to be paid within two years.

The right is reserved to reject any or all bids

United States Shipping Board Emergency Fleet Corporation

140 NORTH BROAD STREET, PHILADELPHIA, PA.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Some Scrap in the West" is the title of a circular published by the Davis-Bournonville Company, Jersey City, N. J. "And Davis-Bournonville apparatus in the midst of it, 'cleaning it up'! That is the story of many a big scrap heap turned into easy money with Davis-Bournonville oxy-acetylene welding torches to reclaim and put into commission broken machine parts, or Davis-Bournonville cutting torches to cut up unwieldly sections into charging box size for the foundry. In this particular illustration a water-cooled welding torch is being used to weld a large broken casting which has been preheated and is covered with vulcanite paper to retain the heat. The acetylene and oxygen tanks, welding rods and fluxes are in evidence, indicating the extreme portability of the outfit in the surroundings of the 'biggest scrap heap on the Pacific Coast.'"

Pneumatic Tools are described and illustrated in a catalogue just published by the Keller Pneumatic Tool Company, Grand Haven, Mich. "In the new Keller catalogue you will find pictured and described the line of Master-Built pneumatic tools that has been adopted as standard equipment by leading railroads, Government shipyards, shops and foundries throughout the country. From the new Keller catalogue you can now buy valve and valveless drills (recent additions to the line), as well as scaling, chipping and riveting hammers, holders-on, dolly bars, jam riveters and sand hammers. There's a Keller-Master tool for every purpose—and every Keller-Master tool is the best for the purpose. If you have not already received a copy of the new Keller catalogue it will pay you to drop us a line at once, on your business letterhead, as a means of making sure that you are not overlooked. You'll be vitally interested in what the book says about Keller-Master tools; you'll find the tools themselves can be depended upon to do a great deal more than the utmost that we have ventured to claim for them."

"The Importance of a Strong Constitution" is the title of a circular published by the Coes Wrench Company, Worcester, Mass., describing the Coes "Steel-Handle" wrench. "A man who is sick most of the time cannot accomplish much—nor a wrench, both must have a strong constitution. Just as each part of the human body must contribute its share of strength, so must each part of a wrench unite with the other part for this same accomplishment. There must be no weak parts. Coes 'Steel-Handle' wrench is a good example of how strong and serviceable a screw wrench can be made when useless parts are eliminated. With a constitution made up of six solid, simple whole parts, all united by the strong Coes method, there isn't a sign of weakness in a Coes steel wrench anywhere. These two models are especially made for trying service—in moisture (hot or cold) and for heavy duty."

High Grade Bronzes for Engineering Purposes is the name of the new catalogue which has just been published by the American Manganese Bronze Company, Holmesburg, Philadelphia, Pa. This catalogue will be forwarded to any individual or concern who writes to the company on the official business letterhead. The publication contains descriptive material and illustrations on hydraulic castings, gear wheels, propellers, ingots, valves, bronze forgings, bearings and bushings, rods, rolls and shapes, etc.

A Hand Book for Eye Protection for the Industries is published by Strauss & Buegeleisen, 438 Broadway, New York. This is an interesting little publication, from which we quote as follows: "These pages contain an expanding collection of notes made at various times and frankly used as convincing arguments for our products. They are arranged in a semblance of order, but in some points (especially those which are worth it) we have added explanation to proof, and demonstration to conclusion, even at the risk of repetition. Our only excuse is that we are wrapped up in the subject of eye protection to the exclusion of all side issues; and that among safety men (all more or less technical diggers after facts) these same sets of facts and proofs have made us widely and favorably known at times to our profit—and always, we hope, to the benefit of the men in the mills."

This Booklet Shows How To Make Boiler Cleaning Easy

The antiquated method of removing boiler scale with a hammer and chisel is both expensive and time-consuming.

This little booklet shows how scale may be handled in a simple manner. It also shows the increased cost of coal due to scale forming in boilers.

DIXON'S PIONEER
BOILER GRAPHITE

is not a cure-all, but it is the most nearly perfect solution of a troublesome problem.

The formation of scale can rarely be prevented by any treatment, but flake graphite checks it from burning fast to the metal and thus renders a great service at cleaning time.

The action of Dixon's Pioneer Boiler Graphite is mechanical, not chemical, absolutely safe and harmless. Its use reduces the expense of cleaning boilers to at least one-half of what it formerly cost.

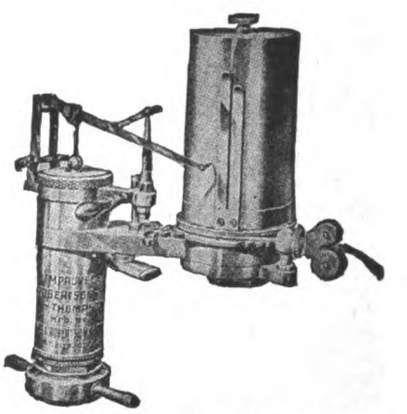
Write today for your copy of this Booklet No. 75-T, "Graphite for the Boiler."

A sample copy of "GRAPHITE", published monthly in the interest of Dixon's Graphite Products and their uses, will be sent free to those requesting. Ask for No. 75.

Made in JERSEY CITY, N. J., by the

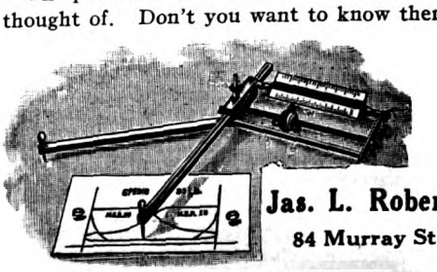
JOSEPH DIXON CRUCIBLE COMPANY

ESTABLISHED 1827



You can't feel your Engine "Pulse" without a good Indicator—Here's the Robertson-Thompson and the Willis Planimeter. THE A. B. C. WAY OF REALLY KNOWING to the absolutely accurate and direct figuring of diagrams. THEN YOU KNOW.

The prices for these instruments are lower than you ever thought of. Don't you want to know them?



Jas. L. Robertson & Sons

84 Murray St., New York

Generated on 2024-09-12 09:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"A New Principle in Welding and Cutting Apparatus" is the name of a short bulletin which has been issued by the Bastian-Blessing Company, West Austin avenue at La Salle street, Chicago, Ill. This bulletin describes the principle of Rego torches which are used with the welding and cutting devices placed upon the market about a year ago by the Bastian-Blessing Company. "Four years of laboratory and shop tests were spent in the development of the Rego principle, whereby equal volumes of both gases are used and the flashback eliminated. Constructionally, there were certain principles which ten years' experience in oxy-acetylene welding and cutting had proven to be correct. The gases should mix in the tip, so that each time the tip is changed the mixing chamber may also be changed. This is necessary to secure correct volumes of gases at low pressures. This form of construction is also preferable because the torch can be more easily repaired; because the volume of mixed gases is always very small (not true in the torch which mixes the gases at the end of the handle), and because a defective mixing chamber does not mean faulty operation of the torch on the other tips, as it does mean with the torch which mixes the gases back of the tip. There should be no thread on the tip itself, because the torch head naturally expands when heated and contracts as it cools. So do the tips, but the rate of their expansion and contraction is invariably different from that of the head, since they are invariably of different materials. Therefore, a thread on the tip either binds or strips and is quickly ruined. The tip should be of some material other than brass or any of the compositions high in zinc, since, under the terrific heat of operation, the zinc will be fused quickly and the tip destroyed. Copper, or any alloy very high in copper, should be used. If cone seat construction is used on tip, the angle should be broad enough to prevent the tip sticking into the head, and the union nut should be so threaded that the force exerted to make the tip tight will not crack the head. These features of construction are neither new nor original. They are the result of studying all kinds of torches in operation, and ascertaining by this means the mechanical construction which is proper to withstand the abuse to which torches are always subjected. In the principle of mixing the gases, however, an original departure has been made from the existing apparatus. The Rego brings the gases to the mixing chamber with the acetylene under a slightly greater pressure than the oxygen. High pressures are not necessary. On a tip which is a size larger than ⅛ inch, the acetylene pressure is only 9 pounds. The acetylene, being slightly in excess in pressure, holds back any excess oxygen under any and all conditions; whereas in torches issuing oxygen under a heavier pressure, conditions are always present whereby an excess of oxygen must be used."

Forged Steel Flanges for boilers and tanks are described by the Scully Steel & Iron Company, Postoffice Box 814, Chicago, Ill., in a circular the company has recently issued. "We furnish forged steel flanges, threaded or blank, for all class of work. Scully flanges are forged from open-hearth steel and have heavy reep hubs with perfect threads."

"Facts for Operators of Electric Hoists" is the title of a comprehensive booklet prepared by the engineering committee of the Electric Hoist Manufacturers' Association. Another booklet on track, supports and current conductors will be issued shortly. Both these publications may be obtained from the secretary of the organization, W. C. Briggs, 30 Church street, New York City.

The Mietz Oil Engine is described in a catalogue published by the August Mietz Corporation, 428 East Nineteenth street, New York. "A saving of 40 percent is accomplished under actual service conditions, not manufacturers' test. The pioneer of this type operating on low-grade fuels exclusively. Does not use any of the high pressures and is free from the use of complicated auxiliaries, and does away entirely with electric ignition devices, carburetors, valves, etc. Built in sizes from 40 to 350 horsepower, in both reversing gear and direct reversible types. Gives a maximum of simplicity, reliability, durability and economy in every respect. Used by the United States Government, foreign governments and the merchant marines of the world. We also build stationary engines for all power purposes. Send for data, stating your requirements."

"Magnetic Chucks" is the title of an illustrated 44-page catalogue published by the Heald Machine Company, Worcester, Mass. "The use of magnetic chucks for holding work to be machined has greatly increased during the past few years, especially among progressive manufacturers who are looking for the best and most productive methods. These manufacturers have found the magnetic chuck not only more efficient and quicker to operate, but in many cases less expensive to install than special fixtures that would be necessary for the same work. This is true not only in their application to grinding machines but also to milling machines, planers, shapers, lathes, etc. In fact, the possibilities of magnetic chucks and the variety of work that can be handled by them are so great that they must surely gain rapidly in popularity as their merits become better known. One of the best investments a machine shop can make is to install magnetic chucks for many of its grinding, milling, planing and turning operations. The adoption of magnetic chucks will often increase the production of a machine 50 percent or more by the elimination of lost time in setting up the work."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

NATIONAL ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 806 Vine St., Camden, N. J.

THE AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 127 Woodside Ave., Narberth, Pa.
Vice-President—W. A. Leavitt, Jr., New York Shipbuilding Corporation, Camden, N. J.
Secretary—B. G. Barnes, 1596 North Ave., Bridgeport, Conn.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.

NATIONAL MARINE ENGINEERS' BENEFICIAL ASSOCIATION OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 88 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Beauville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

INSTITUTE OF MARINE ENGINEERS, INCORPORATED
The Minories, Tower Hill, London.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

Practical Marine Foreman and Engineer wishes connection with repair shop. Would act as foreman and invest $3,000 to $5,000. Locate anywhere. References. Address *Box 66*, care of MARINE ENGINEERING.

Shipbuilder, with 18 years' experience in leading yards and New York harbor work, seeks responsible position as designer or naval architect, or would act as consulting engineer to parties contemplating extension of present fleet. Address *Designer*, care of MARINE ENGINEERING.

Marine Oil Engines for Sale—Four 100-horsepower Fairbanks-Morse new oil engines; four 350-horsepower Diesel engines; two 500-horsepower Diesel engines; one 25-horsepower Fairbanks-Morse type "Y" crude oil engine. *Inland Navigation Company, Inc.*, St. Louis, Mo.

An Aggressive Salesman, who has a thorough first-hand knowledge of ships, shipping, shipyard requirements, and a wide acquaintance along the Atlantic Coast, has opened a Manufacturers' Agency, with headquarters in New York City. Manufacturers who wish representation, on a commission basis, by an agency using trained salesmen, experts in advertising and selling, who can place your goods throughout the East, should "establish communication" with a man who is in the habit of getting results. Address *Salesman*, care of MARINE ENGINEERING.

Joiner Draftsman—Graduated from good school; thirteen years' experience from different shipyards, and has the last seven years had charge for all joiner work on both cargo and passenger vessels, wants to change position. Address *Joinerman*, 1919, care of MARINE ENGINEERING.

Diesel Engineer — Wanted immediately for a responsible and permanent position a competent and experienced Diesel Engine Engineer. Must be able to take complete charge of Marine Diesel engineering and designing work. Location New York. Address *Box 85*, care of MARINE ENGINEERING.

High-Class Engine Designer Wanted, also draftsmen, tracers and designers for structural and mechanical work on boats, derricks, etc. Good salaries and permanent position to the right men. Address *Chief Engineer, The Dravo Contracting Company*, Engineering Works Department, Pittsburgh, Pa.

Superintendent or Works Manager available. Capable of taking charge of drydocks or floating docks and all hull repairs and refrigeration installations. Many years' experience with leading British and Canadian firms. Can make estimates on hull repairs. Personal interview desired. Address *Box 505*, care of MARINE ENGINEERING.

For Sale — One 13-inch General Electric type P. C. thirteen, twenty-ampere, one hundred fifteen-volt direct-current searchlight, complete with rheostat, overhauled and in A-1 condition. Three 67-foot and three 75-foot cargo booms in good condition. Address *Freeport Sulphur Company*, Freeport, Tex.

Designing and Detail Draftsmen—For permanent positions with large manufacturing concern in New England. Men with electrical, steam engine, turbine or special machine experience. Apply, giving age, experience, education and salary expected by addressing *Chief Draftsman, Box No. 90-X*, care of MARINE ENGINEERING.

Graduate Naval Architect, now in Government service, desires place as general superintendent. Familiar with office and outside work on hull and engines and modern shop practice. Specialty, the logical application of bridge shop methods to hull construction. Address *Box 375*, care of MARINE ENGINEERING.

Designing Engineer—Wanted immediately a Marine Designing Engineer for a responsible and permanent position. Good opportunity for right man. Must be able to take complete charge of specifying, designing and ordering material for steam vessels. Must have good education and experience. Location New York. Address *Box 74*, care of MARINE ENGINEERING.

Oil Engine Drawings for sale in full sets of standard shop working drawings. For 5,000- and 9,000-ton steamers, four-cylinder, 24 by 36, 1,450 horsepower, by 96 sheets, $2,200; for tugs, four-cylinder, 18 by 27, $1,000, and four-cylinder, 16 by 24, $900. For yachts or as auxiliaries, steel column crosshead type, 10 by 12, $900; 6 by 8, $600; 4 by 5 trunk piston, $300. Address *Fuel Oil*, care of MARINE ENGINEERING.

"For Speedy Production" is the title of Arc Welding Bulletin No. 104-O, published by the Lincoln Electric Company, Cleveland, Ohio. "The answer to the urgent call for speedy production is found in the Lincoln arc welder."

A Ten-Foot Gate Shear is described in Catalogue O-930, issued by Bertsch & Company, Cambridge City, Ind. "Ten-foot gate shear for shearing 1¼-inch plates. Made in all standard sizes. We have had forty years' experience designing and building this class of machinery, also bending rolls, punches and presses. Any size up to 150 tons in weight."

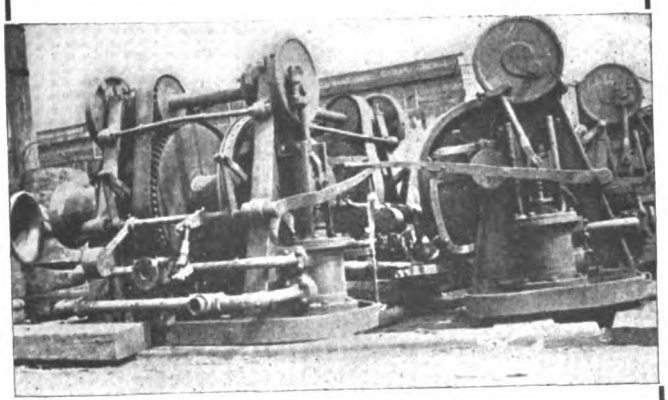
A One-Man Roll Table is described in illustrated Bulletin 6-BY, issued by the Thomas Spacing Machine Company, 1226 Fulton building, Pittsburgh, Pa. "A convenient, moderate priced equipment, which facilitates the handling of plates, etc., in punching with single punch eliminates jib cranes and helpers. By its use as high as 7,000 holes can be punched in nine hours."

Meeting Engineering Demand has been a great accomplishment of the American Spiral Pipe Works, Chicago, Ill. The company has just issued an unusually handsome catalogue of 88 pages, profusely illustrated by half-tone engravings, showing some of the company's actual production. In addition there are several plates. The American Spiral Pipe Works manufactures Taylor's spiral riveted pipe, special pipe fittings, lap welded steel pipe, forged steel pipe flanges, the Taylor seamless forged steel boiler nozzle, corrugated furnaces of several types for land and marine boilers, and similar engineering work. The catalogue states, "These pages may have shown you a solution to your particular problem of construction—but if not, consult our engineering department at any time. Our real accomplishment has been that of meeting engineering demands as they presented themselves, frequently anticipating this demand because of our specialization in this field."

The Nash Hytor, a pump for air and gas, vacuum or pressure, is described in a circular published by the Nash Engineering Company, South Norwalk, Conn. "The advantages of the Hytor are many. There is only one moving part, the rotor, molded in one piece with heavy shrouds cast integral. This is keyed to a sturdy shaft, rotating on annular ball bearings mounted outside of casing. The rotor revolves with a clearance. There are no sliding vanes, loose-moving or reciprocating parts in the pump. Interior lubrication is therefore not necessary, and the air is delivered absolutely free from oil, dust or metal particles. As several blades act simultaneously, the Hytor delivers air absolutely without pulsation. Various liquids may be used in the casing as the displacing medium. This permits the handling of acid gases, a liquid being adopted which protects and neutralizes the effect of the gas upon the metal of the pump."

Generated on 2024-09-12 09:00 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Eight Steam Winches Almost New.—Bargain For Quick Cash Sale



Each weighs 5000 lbs. and is of Reversible two cylinder type, worth $1,300.00 new.

FOR PARTICULARS ADDRESS

STANDISH CHARD
2 Rector Street New York City

"Wire your ships against fire"

TRADE
FDW SYSTEM
MARK

AUTOMATIC FIRE ALARM

Fire Detecting Wire Co., Inc.
2 West 45th Street New York
Telephone 3526 Vanderbilt

Designer with good practical and theoretical experience in Diesel Engines and Surface Ignition Engines, willing to take position in Sweden. State references, experience and salary wanted.

Bolinders Company
30 Church Street, New York City

FOR SALE

Triple Expansion Marine Engine 18″ x 32″ x 54″—42″ stroke. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾″ stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

FOR SALE

To reduce our stock of surplus war materials we offer for immediate sale the following:

Clear and Common Oak, 1″ to 12″ thick; 12′ to 40′ long.

Clear White Pine, ½″ to 3″; 6′ to 16′ long.

Spruce, Cedar, Mahogany, Ash, Elm, Long Leaf Yellow Pine, Hackmatack Knees, all sizes.

Brass and Iron Marine Hardware, Woodworking Machinery.

If interested, apply promptly to

THE MATTHEWS COMPANY
PORT CLINTON OHIO

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

FOR SALE
QUICK DELIVERY

Diesel Motor Cargo Vessel "CERRITO." Principal dimensions are as follows: Length 170', Breadth 25', Depth 16', Draft Loaded 10' 6". Speed when loaded 6 to 7 1-2 knots. Single Screw. Powered with a 240 B. H. P. "Nelseco" Heavy Marine Oil Engine.

Now in active trade in Gulf of Mexico Waters. Low operating cost and a money-maker.

For further information write

The New London Ship & Engine Co.
GROTON, CONN.

WANTED

Hull Draftsmen for Steel Shipyard in South. Must be experienced in modern merchant practice and familiar with rules of classification societies. Only competent men of pre-war experience need apply. Give full particulars in first letter.

Box 2, MARINE ENGINEERING
6 East 39th Street, New York City, N.Y.

Wanted—Shipyard Executive

Duties, general supervision with exception of office routine. None considered who had not received a salary in excess of $4000.00 a year prior to 1914. Reply with full record, giving details of education, shipyard experience, salary expected, etc.

Address, Box 516,
care of MARINE ENGINEERING.

Faessler's new line of roller expanding and flaring tools for stationary, marine and locomotive boilers is described in an illustrated catalogue just issued by the J. Faessler Manufacturing Company, Moberly, Mo. "These new expanders, first shown to the trade at the Chicago convention, are the latest development of Faessler's thirty-five years' experience and specialization in the making of boiler makers' tools. Each is for hand operation, is self-feeding and performs a perfect job of rolling the tube tight in the sheet and also flaring or belling to any desired angle up to 45 degrees. Both expanding and flaring operations are done with the same tool, which is not removed from the tube until the work is completed. Our process does not pinch or thin the tube at the bottom of the flare and the outside edge of the sheet. Made throughout of heat-treated and tempered steel, these tools are extremely durable and wear is reduced to a minimum. They insure better, faster and easier work, in both construction and repairs. In ordering please give both the outside diameter and the gage of the tool. Let us send you our catalogue and show you how you can add to the speed and effectiveness of your boiler work."

Accurate Centering secured by the use of the Cleveland Foating Punch. This is the subject of a bulletin published by the Cleveland Punch & Shear Works Company, Cleveland, Ohio. "Equip your punching machines with the Cleveland (patented) floating punch attachment and you will not only get accurately centered holes but also increased production. The Cleveland floating punch attachment is used for punching plates that have been laid out with prick marks denoting the location of the holes to be punched. The center point marks are easily located, for the reason that the floating punch rests on the material at all times following every undulation of the surface. The punch is forced by the power stroke through the material, on the return stroke it is stripped clear and again returns to the plate ready for the next power stroke."

Welding Locomotive Fireboxes.—Realizing that the practice of welding locomotive fireboxes instead of riveting is receiving increased attention in locomotive shops, the Air Reduction Company, New York, has published a booklet describing the Airco process of oxy-acetylene welding as applied to this character of work. The booklet is designed to help the operator by showing him the proper methods to follow when welding a firebox. It describes the operation necessary for full and semi-welded side sheets, cracks in side sheets, full welded door and flue sheets, patches on fireboxes and flue sheets, patches on mudring, welding of door collars and door holes, building up worn edges of fireboxes, etc. Full-page drawings illustrate the different operations.

The "Buffalo" Ball Bearing Drill is described in a circular published by the Buffalo Forge Company, Buffalo, N. Y. "This machine has a strong, well ribbed frame with shafts and spindle of steel, carefully turned and fitted. Two feeds, hand and automatic, are provided—the latter being adjustable to three speeds. Has one-spindle speed. A hardened steel ball bearing takes up friction between spindle and feed screw. Table is slotted and can be easily raised or lowered or swung aside, out of the way when desired. Fitted regularly with Buffalo improved chuck."

"They Say Seeing is Believing" is the title of a circular issued by the J. Faessler Manufacturing Company, Moberly, Mo. "That's why we want you to try out one of our Faessler safety sectional expanders and see for yourself how one man using it can do twice as much work as two men with ordinary equipment. All Faessler tools are built on the same principle—to make labor lighter and to increase working speed. Those boiler shops who have tried them are using them in preference to all others, and the increased output they have been able to show in spite of the reduction in working forces is convincing proof that Faessler tools are faster tools. Prove this for yourself. Our sixty days' free trial offer is open to you. We build everything in boiler-making tools and special tools for special uses if required."

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Seven of the eight are now accepting orders

DURING the war, notwithstanding the fact that our factories produced more than ever before, it was sometimes impossible for us to guarantee delivery dates even months in advance.

But now, seven of our eight plants can ship standard Worthington equipment on receipt of the order. And the other plant—which is working night and day to clean up work left over from the war—will also soon be able to meet normal demands.

For it is peculiar of the products we supplied for war purposes that they are the same in

PUMPS-COMPRESSORS-CONDENSERS-OIL & GAS ENGINES-

WORTHINGTON

Worthington Works
Harrison, N. J.
Blake & Knowles Works
East Cambridge, Mass.
Deane Works
Holyoke, Mass.
Hazleton Works
Hazleton, Pa.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Even Where Fuel Costs Nothing It pays to Use 85% Magnesia

THE Kaul Lumber Company's saw mill at Kaulton, Ala., is a model of modern industrial efficiency.

The 2,000 H P boiler not only provides the power for all mill operations but also furnishes an ample supply of steam for the drying kilns and other buildings.

As is the case with most lumber mills, so plentiful is the supply of wood fuel that a big incinerator runs day and night to burn up the waste of slabs, cuttings, sawdust, etc. which is not only valueless but a positive nuisance.

Yet despite the fact that this fuel costs them nothing, all of their steam pipes and boilers are protected with 85% Magnesia.

The reason is of course that the 85% Magnesia covering insures greater *efficiency*—that in place of a wet "soggy" vapor, their engines always have an ample supply of hot *dry steam*.

Where coal is scarce and dear, 85% Magnesia is also a marvellous fuel *saver*, but no matter what your fuel cost, whether high or low, you will find your operating conditions are always better, your steam supply always adequate, if you cover your pipes, boilers, flanges and fittings with this matchless heat insulation.

Write for the new Table of Actual Monthly Coal Saving in Dollars and Cents, prepared by the Mellon Institute of Industrial Research. To Engineers and Architects we will also send the Specification for the correct application of "85% Magnesia" coverings, compiled by the same institute.

MAGNESIA ASSOCIATION *of* AMERICA

85% MAGNESIA UNIVERSAL COAL SAVER

721 Bulletin Bldg.
Philadelphia
Penna.

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D. Crabbs, The Philip Carey Co., Cincinnati, Ohio
Alvin M. Ehret, Ehret Magnesia Mfg. Co., Valley Forge, Pa.
J. R. Swift, The Franklin Mfg. Co., Franklin, Pa.
R. V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Pa.

Copyright, 1919, by M. A. of A. Permission to reprint by application.

Photo courtesy by W. H Fleming, Birmingham, Ala.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

"The Best Machine Tools for Marine Equipment Manufacture" are described by the Niles-Bement-Pond Company, 111 Broadway, New York, in various catalogues. "We build machinery for ship shed use—keel bending machines, plate planers, garboard bending machines, flanging presses, shears, radial drills—machinery for the manufacture of the heaviest boilers, special equipment for handling armor plate, guns and gun mounts. For marine engine and steam turbine manufacture our line of heavy-duty machinery is representative of the best practice in tool construction, and can be used with excellent results. Besides this equipment we also build a complete line of steam hammers, comprising forge, drop, board drop and tilting hammers in capacities up to the largest ever built. They are entirely dependable and are designed to operate continuously with the least attention. We also build Pratt & Whitney precision machine tools. As originators of the system of interchangeable manufacture, the line of precision machine tools, as developed in our Pratt & Whitney shops, is unequaled for accuracy and refinement. Many of the machines that go out under the Pratt & Whitney name are practically automatic in action, and are designed to permit the accurate machining of intricate and delicate parts without requiring highly skilled attention. We mention some recent additions to our line which are special and original with us: automatic milling machines, horizontal automatic profiling and cam cutting machines, vertical shapers, jig boring machines, contour cutter grinder. Niles cranes will be found to answer the various requirements of shipyard and drydock, as they include electric traveling cranes from 5 to 250 tons, and larger capacity, gantry cranes, yard cranes, wall cranes, as well as grab bucket hoists and trolleys. Pratt & Whitney small tools enjoy an enviable reputation for high quality that has been well earned in the production shops of the country. In shipyards and railroad shops, where stamina as well as accuracy are required of the small tool equipment, Pratt & Whitney tools have more than held their own. We can honestly recommend them—our line is complete. Prompt service is assured at our nearest store, where P. & W. small tools are carried in stock for immediate delivery. Place your order there today. We will be glad to send you copies of our catalogues 'Small Tools,' 'Gauges and Standards.'"

"Propellers in a Nutshell" is the title of a booklet published by the Columbian Bronze Corporation, 50 Church street, New York, from which we quote as follows: *"Tampa,* one of the ten sister cargo ships being built to the order of the Emergency Fleet Corporation by the Oscar Daniels Company Tampa, Fla., is 416 feet in length, 53 feet beam, 28 feet molded depth, with a deadweight capacity of 9,600 tons. Her propeller equipment, through which her 2,800 shaft-horsepower drives her at 11 knots, is worthy of mention, as indicating our ability to handle propeller castings of almost any size required. The 17-foot by 15-foot 6-inch sectional type-wheel is fitted with four 3,800-pound blades of Columbian manganese bronze, cast by us at our foundry at Freeport, L. I.; the cast iron hub and machine work are by Hardie-Tynes Manufacturing Company, Birmingham, Ala. We manufacture complete steamship and motor ship propeller equipment, including propellers; intermediate and tail shafts in bronze and steel up to 10 inches in diameter, in bronze up to 5 inches; shaft couplings; stern tubes, stern bearings, babbitted or lignum vitæ lined—all to Lloyd's specifications where required or to your specifications otherwise."

"Industrial Transportation" is the title of a booklet issued by the Bicycle Manufacturers' Association, 30 Pearl street, Hartford, Conn. This booklet has been issued to call the attention of industrial concerns to the advantage of the bicycle as a method of transportation for working men and women. No mention is made of the name or manufacturer of any bicycle. A copy of the booklet will be sent free to any of our readers upon request.

Convenient Producing Plants

The Backbone of Prest-O-Lite Service

NATION-WIDE Prest-O-Lite Service brings straight to the user's hands a single cylinder of highest-temperature gas—or hundreds of cylinders—

Such a Service must have a backbone strong enough to carry the tremendous load of national demand, flexible enough to meet the ever-changing needs of any one of an army of users.

Buffalo, N. Y.—A new Prest-O-Lite charging plant.

40 Plants and Warehouses Supply

Prest-O-Lite

DISSOLVED ACETYLENE

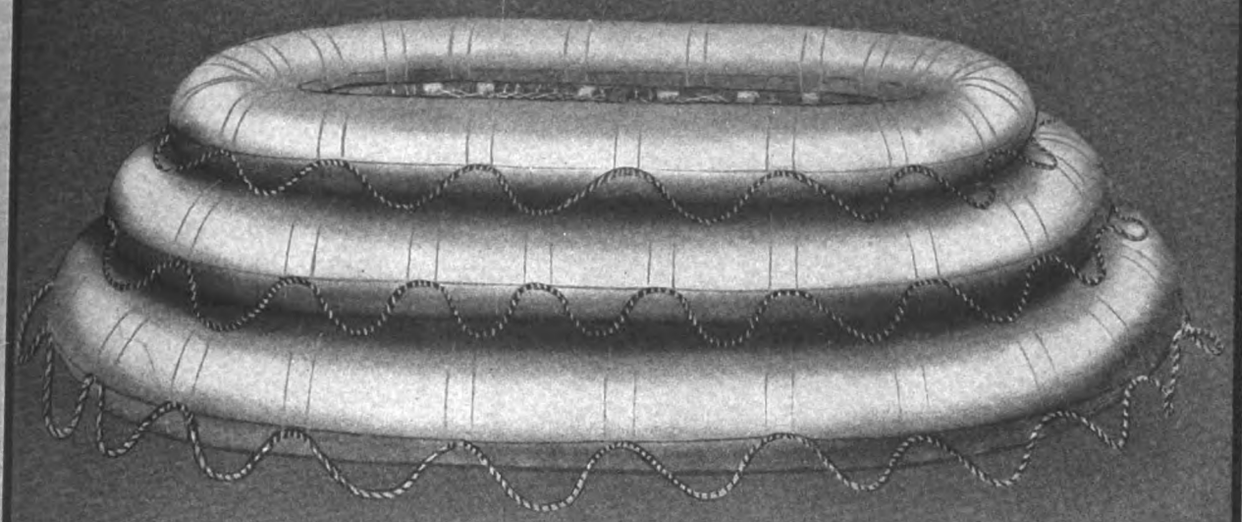
Wherever you may be located, however large or small your requirements, there is an efficient Prest-O-Lite *producing* plant near—ready to serve you quickly and well.

THE PREST-O-LITE COMPANY, Inc., General Offices 30 East 42nd Street, New York
Kohl Building, San Francisco
In Canada—Prest-O-Lite Co. of Canada, Limited, Toronto

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. **50 E. 42nd Street, New York**

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Automatic Tension Towing Engine is described in an illustrated catalogue which has just been issued by the Lidgerwood Manufacturing Company, 95 Liberty street, New York. This is said to be the essential element in the Lidgerwood-Miller marine cableway for transshipment at sea of coal, ammunition, supplies, mail, etc., and for life-saving at sea. "The Automatic Tension Engine has double horizontal cylinders, with one rope drum mounted either on the crankshaft or on a second shaft geared to the crankshaft. This drum is connected to its shaft through the medium of heavy springs, allowing a limited rotation of the drum on the shaft independent from the rotation imparted to it through the shaft itself. Changes of tension in the rope cause the drum to rotate slightly on the shaft, either against or in the direction of the spring pressure. This motion of the drum operates a controlling valve which raises or lowers the steam pressure as required to maintain a constant tension upon the rope. The spring is therefore a feeler or detector of tension changes. The action is instantaneous, and no appreciable interval of time elapses after a change in tension before there is a compensating change in steam pressure. The steam for operating the engine is introduced into the cylinders through a novel form of controlling valve. This valve regulates the amount and pressure of the steam supplied to the cylinders. Mechanical elements connect the drum and the valve, so that the movement of the drum, caused by variations of the tension in the rope, is transmitted to the valve, and the steam admitted through the valve always bears a definite relation to the tension in the rope. A slight increase of tension causes a reduction of steam pressure, permitting the rope to overhaul the engine and restore the tension to normal. A slight reduction of tension causes an increase of steam pressure, causing the engine to take up slack in the rope and restore the tension to normal. The tension developed by this engine in pulling in is slightly less than the resistance set up to overhauling. The tension or stress in the rope is controlled within 10 percent of uniform. In addition to the automatic control of tension fluctuations, there is provided means for manually regulating the tensioning capacity up to the maximum for which the engine is designed."

The New Line of Faessler Expanders is described in an illustrated circular issued by the J. Faessler Manufacturing Company, Moberly, Mo. "Although it is less than three months since the new Faessler line of spiral expanders was introduced to the trade at the Chicago convention, these tools have created a profound impression. Locomotive superheater tubes, locomotive arch tubes, stationary, watertube and marine boiler tubes. They are admirable in every respect—perfectly balanced in design, easy to operate, exact in their work, and, being made throughout of heat-treated and tempered steel, are extremely durable. All the qualities requisite for fast, clean and accurate flaring and expanding are embodied in these latest products of a firm which for thirty-five years has devoted itself entirely to the designing and manufacturing of boiler makers' tools of the highest grade. If you wish your men to perform the best work possible you must furnish them with the best expanders—that is, Faessler's."

W S M Automatic Ore Unloaders are described in Bulletin 27, just published by the Wellman-Seaver-Morgan Company, Cleveland, Ohio. "This automatic unloader is unique in design and has proved through many years of service to be one of the most successful devices for unloading ore cargoes from lake steamers that has ever been devised. Although of immense proportions, the design has been simplified and the control perfected to such a point that the machine is the last word in delicacy of control and operation. A record was made in Ashtabula by eight machines of this type having a capacity of 15 tons each, unloading seven boats having a total capacity of 70,000 tons in 22 hours actual time. At other points, four machines working in boats having capacities up to 13,000 tons have unloaded these cargoes in about three hours and twenty-five minutes."

IRON STEEL METALS

ARTHUR C. HARVEY CO.

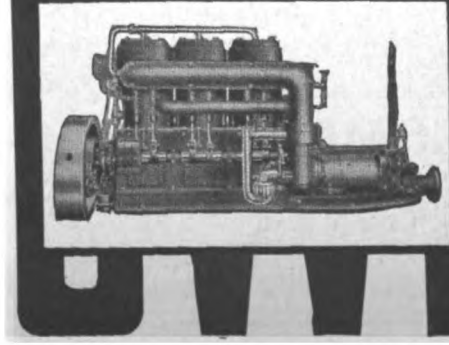
374 Congress Street Boston, Mass.

Tel., Main 7000

BOILER TUBES, RIVETS, PLATES, TANK STEEL, FLOOR PLATES, BARS, SHEETS, STRUCTURAL SHAPES, COLD ROLLED SHAFTING.

WE ARE EQUIPPED TO CUT TO SIZE ANYTHING CARRIED IN STOCK.

POWER



WOLVERINE

"The Motor With the Bore & Stroke"

PLUS FUEL COST REDUCED

From 70 to 80 per cent without sacrificing reliability, flexibility or control. Perfect combustion on kerosene or lowest grade of Coast Distillate.

5 to 200 H. P. — 1 to 6 Cylinders

Ask for Catalog 73.

WOLVERINE MOTOR WORKS, Bridgeport, Conn.

Generated on 2024-09-12 08:32 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SEVENTH EDITION

PRACTICAL MARINE ENGINEERING

REVISED AND ENLARGED

By Rear Admiral C. W. Dyson, U. S. N.

This book is devoted exclusively to the practical side of marine engineering and is especially intended for engineers and students and for those who are preparing for examinations for marine engineers' licenses for all grades. It gives complete details regarding marine engines and all that pertains to them, together with much information regarding auxiliary machinery. It covers the general subject of calculations for marine engineers and furnishes assistance in mathematics to those who may require such aid.

Boilers, reciprocating engines, steam turbines and reduction gears (mechanical, hydraulic and electric), are treated exhaustively. A separate chapter deals with internal combustion engines (Diesel and heavy oil) and producer gas plants. Oil fuel burning and the latest practice in superheated steam are taken up in detail.

The chapter headings include the following:

MATERIALS
- Fuels (coal and oil)
- Boilers (Fire tube and water tube)
- Oil Fuel Burning
- Marine Engines
- Reciprocating Engines
- Steam Turbines
- Internal Combustion Engines
- Gasoline
- Heavy oil (Diesel)
- Producer Gas

AUXILIARIES
- Pumps
- Condensers
- Feed Heaters
- Filters
- Evaporators
- Lubricating Devices
- Separators
- Blowers
- Pneumercators
- Time Firing Regulators
- Steam Traps
- Ash Ejectors, etc.

- Valves and Valve Gears
- Refrigeration
- Electricity
- Propulsion and Powering
- Operation, Management and Repairs
- Boilers, Engines, Turbines and Auxiliaries
- Indicators and Torsion Meters
- Special Topics and Problems
- Computations for Engineers

The sixth edition has been enlarged by the addition of a chapter on miscellaneous machinery covering steering engines, capstans, windlasses, boat cranes, anchor engines, ash hoisting engines, towing engines, ventilating, heating and cooling apparatus, sirens and whistles, fire extinguishing and fumigating apparatus, reducing valves and regulating valves. The book now covers the latest practice in both propelling machinery with their auxiliaries and the deck machinery used in the handling of a vessel and her cargo.

MISCELLANEOUS MACHINERY

- Steering Engines
- Capstans
- Windlasses
- Boat Cranes
- Anchor Engines
- Ash Hoisting Engines
- Towing Engines
- Ventilating, Heating and Cooling Apparatus
- Sirens and Whistles
- Fire Extinguishing and Fumigating Apparatus
- Reducing Valves
- Regulating Valves

1067 pages. The book is illustrated with 550 diagrams and cuts, showing the most approved practice in the different branches of the subject. The text is in such plain, simple language that any man with an ordinary education can easily understand it.

PRICE $6.00

FOR SALE BY

MARINE ENGINEERING, 6 EAST 39th STREET NEW YORK CITY

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"How This Plant Meets the Emergency" is described in a circular published by the Pawling & Harnischfeger Company, Milwaukee, Wis. "In every wearing mechanism there is a time when some part requires replacement. When it is so fundamental to production as a crane or hoist, a temporary disablement assumes the proportion of a serious emergency. It is then that the crane or hoist user relies upon its builder for immediate aid. At no other time is the value of standardized equipment so forcibly brought home to him. P & H cranes and hoists, though built to meet specific dimensions and requirements, are completely standardized in their component wearing parts: gears, gear cases, brackets, couplings, shafts, axles, bearings, truck wheels, sheaves and breaking equipment. These parts are manufactured in quantities and placed 'on the shelf,' ready for the emergency. When an order for a renewal part is received it passes immediately to the renewal order department, whence it is routed through stock and shipping departments with special dispatch. In all extremely urgent cases the shipments are immediately followed by 'tracers' to avoid delays in transit. But a short time ago a prominent tractor manufacturer near Chicago 'long-distanced' us that a bridge truck wheel on his crane had broken, making further operations hazardous. The new wheel ordered lay at his door the following day. That is how P & H service meets the emergency. We are able to give such degree of service on cranes and hoists of earlier standards; the part-standardization system having been in practice since the early days of our organization. Quantity production of standard crane parts carries with it an advantage fully as important as the renewal feature, namely, speed in crane building. A P & H crane, from girders to motors, is fabricated entirely in the P & H plant; we are manufacturers, not assemblers. During the war period a P & H crane for an Eastern ordnance plant was built and shipped complete in two weeks' time. Such accomplishment would have been impossible had we been dependent on outside sources for competent crane parts. That is how P & H met an emergency."

Electrolytic Oxygen is described in a booklet published by the Gas Products Association, 801 Marquette building, Chicago, Ill. "The term electrolytic, as applied to oxygen, means gas of the highest efficiency for cutting and welding processes. Electrolytic oxygen is sold commercially 99.5 percent pure or better. Produced by the electrical decomposition of distilled water, it is the only oxygen free from nitrogenous impurity. When electrolytic oxygen is used the welder does not have to slow up his operation for fear of nitrogenization. A booklet issued by an oxygen manufacturer who does not use the electrolytic process contains this interesting admission: 'Probably the most important property for the steel of a frog weld to possess is that of ductility. This may be seriously affected by the wrong method of producing the fusion of the joint. Under certain conditions of melting steel the nitrogen of the air may be separated from the oxygen and charge into the molten metal of a weld. The result would be to spoil the ductility of the weld by making it very brittle.'"

"The Pyrograph—A Boiler Cutting Machine," is the title of a booklet just published by the Davis-Bournonville Company, Jersey City, N. J. The pyrograph is stated to be a remarkably efficient device for trimming and beveling flanged boiler sheets, and the statement is also made that very few mechanical engineers or boiler makers will realize what saving of time and labor can be accomplished in the boiler shop with one of these machines. "The Pyrograph (fire writer) is a cutting machine primarily designed for beveling the edges of boiler heads, combustion chamber heads, flue sheets and other steel parts that require trimming after the flanging operation and beveling to the calking angle. The machine trims the sheets with a cutting torch to the required length and bevels them in one and the same operation. It eliminates costly slow hand of pneumatic hammer chipping on flanged boiler work, being adjustable to all shapes of flanges. In one shop boiler plant flanged combustion chamber heads ¾ inch thick, having a flange periphery of 27 feet, are trimmed and beveled to the calking angle in one hour, exclusive of setting-up time."

REG'D TRADE MARK

INTERNATIONAL

COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS

In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually

Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING

INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N.Y.

STRATFORD SPECIAL NO. 1 MARINE OAKUM

receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. It meets the requirements of all of the United States Government specifications. For years we have guaranteed the quality of each bale to be standard of excellence and returnable at our expense if otherwise. More of this grade Oakum has been used by the United States Government and its contractors than all other makes combined, yet, not a single bale has been condemned or rejected, whereas it has replaced the condemned Oakum of almost every other make. Our experience, quality and service are worth more to you than we ask.

GEORGE STRATFORD OAKUM COMPANY Jersey City, N. J.

VALK & MURDOCH COMPANY

CHARLESTON, S. C.

Builders of Marine Boilers, Scows and Lighters

8,000-Ton Floating Drydock		1,500-Ton Marine Ry.		500-Ton Marine Ry.	
Length on Blocks	440′	Length on Blocks	220′	Length on Blocks	100
Depth over sill	22′	Depth over Blocks	14′	Depth over Blocks	7

Marine Repairs a Specialty

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sun Marine Oils

HAVE PROVED THEIR WORTH

QUALITY SERVICE

RELIABILITY EFFICIENCY

Good Ships deserve Good Oils

Let our engineers solve your engine room troubles

SUN COMPANY

1428 So. Penn Square - - - PHILADELPHIA, PA.

STOCKS CARRIED AT

New York City Boston Philadelphia Baltimore Pittsburgh Cincinnati Buffalo St. Louis
Chicago Minneapolis Toledo Newark Newport News Detroit Atlanta New Orleans Sabine

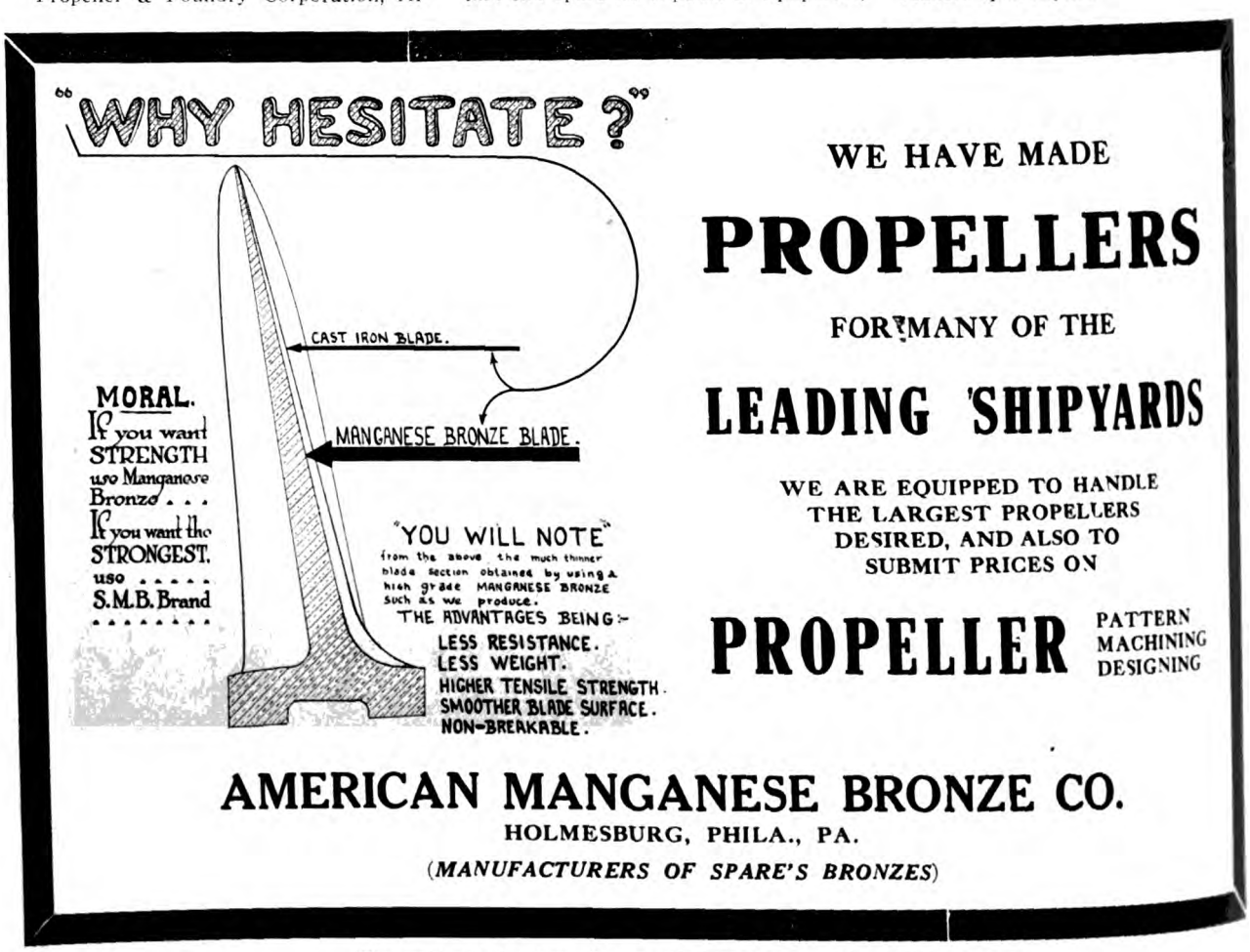
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Electric Air Compressors, portable electric drills and electric valve grinders are described in an illustrated catalogue published by the Black & Decker Manufacturing Company, 105 South Calvert street, Baltimore, Md. "The quality of any mechanical device is dependent upon three fundamentals—design, material, workmanship. Long before the first Black & Decker Lectroflater electric air compressors or portable electric drills were placed on the market the Black & Decker Manufacturing Company designed and built special machinery, such as currency presses for the United States and Canadia Governments, postage stamp machines, duplicators, milk bottle cap machines, moving picture cameras and projectors, shoe machinery and special tooling for other manufacturers' production work. During the war they made, in addition to the regular line of Lectroflater electric air compressors and Black & Decker portable electric drills, such precision apparatus as gun sights for naval rifles, breech mechanisms for airplane cannon, demolition and incendiary bomb firing mechanisms, etc. It is obvious that sound engineering ability must be the basis of such work, and one logically expects—and finds—the predominating feature of Black & Decker products to be their advanced design."

"Thacher Process Propellers" is the title of a 12-page catalogue which has just been published by The Thacher Propeller & Foundry Corporation, Albany, N. Y. "Ship motion is entirely generated by the propeller. Its importance must therefore be recognized by marine engineers. Propeller design is a subject that can be mastered only by the constant and exclusive experience and study of a specialist. That some propellers give good results proves that good design is essential. A better design gives better results. We have in charge of our design an engineer who has always specialized in propeller design; who has made more designs, and proven their success, than perhaps any other marine engineer. We make propeller wheels to any design, but advise that propeller design be made for ship conditions in their entirety. The designing charge is a small part of propeller cost, and its resulting serving will return the investment innumerable times. When an order is placed with us we include the design at no additional cost. Our material melting and metals department is under the guidance of a metallurgical engineer and chemist of national reputation. Every wheel made by The Thacher Propeller & Foundry Corporation is poured of metal mixed by chemical formula. The propeller material after pouring is chemically analyzed and tested for tensile strength, and a full report of tensile strength and measurement data furnished with each wheel. We are making propeller wheels with a complete realization of their importance to successful ship operation, and toward that end spare no expense in equipment, patterns, material, testing and finishing. It is not our intention to compete in price with the commercial propeller wheel. Quality is our only aim, not quantity."

How to Make Boiler Cleaning Easy.—The Joseph Dixon Crucible Company, Jersey City, N. J., has issued a new booklet, "Graphite for the Boiler" which tells in a clear and concise way how to make boiler cleaning easy. The unusual part of this little book is that it does not claim that boiler scale can be entirely prevented but that it can be made easy to remove. An interesting table is included which shows the extra cost of coal due to the various thicknesses of scale present in boilers. The manufacturers will be glad to send a copy of this booklet, No. 75-T, to anyone interested.

"Marine Hardware" is the title of a profusely illustrated cloth-bound catalogue which has just been published by Sargent & Company, New Haven, Conn. In the catalogue is given, numerically arranged, a list of the United States Shipping Board Emergency Fleet Corporation specifications under which hardware shown in the catalogue is acceptable, with the pages on which the different items appear. Also a list of United States Navy specifications, with the pages on which the different items appear. This catalogue should be in the hands of everyone interested in marine hardware and a copy will be sent to any of our readers upon request.


"WHY HESITATE?"
CAST IRON BLADE.
MANGANESE BRONZE BLADE.
MORAL.
If you want STRENGTH use Manganese Bronze . . .
If you want the STRONGEST. use . . . . .
S.M.B. Brand
"YOU WILL NOTE"
from the above the much thinner blade section obtained by using A high grade MANGANESE BRONZE such as we produce.
THE ADVANTAGES BEING:-
LESS RESISTANCE.
LESS WEIGHT.
HIGHER TENSILE STRENGTH.
SMOOTHER BLADE SURFACE.
NON-BREAKABLE.
WE HAVE MADE
PROPELLERS
FOR MANY OF THE
LEADING SHIPYARDS
WE ARE EQUIPPED TO HANDLE THE LARGEST PROPELLERS DESIRED, AND ALSO TO SUBMIT PRICES ON
PROPELLER
PATTERN
MACHINING
DESIGNING
AMERICAN MANGANESE BRONZE CO.
HOLMESBURG, PHILA., PA.
(MANUFACTURERS OF SPARE'S BRONZES)

Generated on 2024-09-12 08:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

New Jersey zinc

The world's standard for Zinc products

ZINC PLATES

Our numerous mines yield such a comprehensive variety of zinc ores that we are able to exactly meet every zinc requirement.

Our rolling mills at Palmerton, Pa., are now prepared to furnish zinc ship plates and boiler plates of any desired dimensions and thicknesses and of just the right quality to best serve their purpose.

This organization with its extensive resources and its seventy years of experience in the development and production of zinc products, has unusual advantages in meeting the needs of the ship building industry.

THE NEW JERSEY ZINC COMPANY, *160 Front Street*, New York

ESTABLISHED 1848

CHICAGO: Mineral Point Zinc Company, 1111 Marquette Building

PITTSBURGH: The New Jersey Zinc Co. (of Pa.), 1439 Oliver Building

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Peterson Marine Type Oil Filters is described in Bulletin S-26, published by the Richardson-Phenix Company, 120 Reservoir avenue, Milwaukee, Wis. "During the war part of the standard engine room equipment of practically all of the ships built for the Emergency Fleet Corporation was a Peterson marine type oil filter. Oil does not wear out; it merely gets dirty; remove the dirt and the oil can be used again. The Peterson marine type oil filter is guaranteed to purify used oil so that the lubricating properties of the filtered oil are equal to new oil. Peterson marine type oil filters are used because they save oil; they save cargo space by reducing the amount of oil that must be carried; they make a ship practically independent of the varying oil supply at foreign ports. If they were a good investment during the war, surely they are a necessity in peace. Designed for marine service the Peterson oil filter can be easily cleaned without stopping its operation; there are no moving parts to get out of order or to replace."

"A Great Combination" is the title of a circular published by the American Engineering Company, Philadelphia, Pa. "In fact, it is rightly called 'the Ideal Combination.' The Benson electric telemetor is simple, positive and instant in operation. Not affected by air pockets or temperature changes. Always ready to work, practically fool-proof, absolutely accurate, low in running expense. The American electric hydraulic steerer —prompt and powerful in action, accurate, sensitive, great holding power with ample provision for relief and recovery in case of overstrain due to heavy seas, economical in operation, and can be built to meet any particular space requirements. In proportion to its size it is the most powerful steerer built. You will be satisfied with the combination."

Williams' "Vulcan" Drop-Forged Chain Pipe Vise is described in a booklet published by J. H. Williams & Company, 61 Richards street, Brooklyn, N. Y. "These vises are unbreakable, compact, rapid in action and positive in gripping pipe. They are attachable anywhere—any handy bench, post or other support will serve. They are made entirely of wrought steel; the drop-forged jaws are steel-tempered for file sharpening and the hand-made chains are of the same superior quality as those of our well-known 'Vulcan' chain pipe wrenches. Vises in three sizes for ⅛- to 8-inch pipe. Remember, Williams' chain pipe tools have been standard for nearly half a century—they are all backed by our absolute and unconditional guarantee of service."

"The Right Valves for Any Pump" are described in a catalogue published by the United States Rubber Company, 1790 Broadway, New York. "The exacting requirements of marine service demand the use of rubber pump valves especially designed for the work they must perform. Upon the valves depends largely the efficiency of the pump. Marine engineers will find it advantageous to specify United States pump valves for service on hot water boiler feed, condenser and air, fire and bilge pumps, etc. Consult our engineering department in regard to the conditions the valves are required to meet. This service is free. There is a United States pump valve to meet every condition of service."

A General Catalogue and price list is issued by the Kennedy Valve Manufacturing Company, Elmira, N. Y. 132 pages; illustrated.

"Why Buy Ship Grating Outside" is the question asked in Catalogue 24 published by Irving Iron Works Company, Long Island City, N. Y. "For the matter of that, why buy anything outside—engines, boilers, blowers, anchors, for instance? Simply because engines, boilers, etc., made by specialists are made better and at less cost than you could make them. Same way with grating—made as a specialty by grating specialists, it's made better and at less cost. We were the first specialists in gratings —we make more gratings to-day than anyone else. That means quantity production, better quality, lower price. Why not put your grating specifications up to grating specialists—which means, up to us?"

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

FOR SALE

Triple Expansion Marine Engine 18" x 32" x 54"—42" stroke. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾" stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Monel Metal" is the title of a catalogue published by the International Nickel Company, 43 Exchange Place, New York. "The United States Government and many prominent shipbuilders were quick to realize the great strength and durability of Monel Metal and its immunity from the corroding action of water, steam or acids and from salt-air exposure. Their engineers specify Monel Metal for pump rods, pump liners, valves and valve seats, and for use in exposed locations on shipboard, such as stair-nosings and handrails, because other metal products last but a comparatively short time under nautical conditions. The British, Japanese and Italian navies, as well as our own, use Monel Metal extensively for shaftings, pump rods and various engineering and fitting purposes. In service, Monel pump rods acquire a smooth, glass-like polish, which reduces friction to a minimum, lessens wear on packing, prevents leakage, and thus effects great savings in power and upkeep. Packing does not harden, and this, coupled with the non-corrosiveness of Monel Metal, virtually eliminates scoring and pitting of the pump or piston rod. Monel Metal is a natural alloy of nickel and copper—strong as steel—tough and ductile. Withstands acids, high temperatures and erosive action of hot gases and superheated steam. Can be machined, cast, forged, brazed, soldered and welded by electric or oxy-acetylene method. Takes and retains a perfect nickel finish. Monel Metal is manufactured in the form of rods, castings, forgings, wire, strip stock, sheets, etc. Some of its common uses, other than marine, are valve trim, stuffing boxes, auto fittings and parts, mine screens, pickling pins and storage battery casings. The Monel booklets show the many uses for which Monel Metal has proved superior. Write us for detailed information as to whether Monel Metal could be substituted with economy and greater satisfaction than the material you are now using. Our technical and research department is at your service."

Electric Arc Welding.—The Westinghouse Company has recently issued an elaborate publication covering the process of electric arc welding and the necessary apparatus required. This publication compares the different processes of welding, such as autogenous welding, forge welding, oxy-acetylene welding, thermit welding, and shows the advantages of electric arc welding over these. Some of the advantages of electric arc welding claimed are: 1, Economy; 2, ease and convenience of application; 3, speed of operation; 4, reliability of results; 5, reclaiming defective material; 6, safety; 7, conservation of material; 8, less skilled labor required. The field for electric arc welding is unlimited and the process has made enormous strides during the last few years. New fields for its successful application are being discovered every day.

Electrical and Mechanical Equipment for Ships is the subject of a catalogue which has just been published by the Horne Manufacturing Company, 2 College Place, Brooklyn, N. Y. The company announces that it will submit estimates for the installation of marine electrical equipment, complete ship telegraph systems, and the installation of voice tube systems.

Storage Tanks are described in Bulletins 79 ME and 88 ME, published by the Wayne Oil Tank & Pump Company, 589 Canal street, Fort Wayne, Ind. "The first cost of a tank is the least thing to consider. Once a tank is installed, especially underground, it will cost you as much as the price of the tank to take it up and repair any leakage that may occur. Tanks may hold water, even steam pressure, but gasoline and volatile liquids require special care in construction and carefully selected materials. Some tanks are built down to a low price, and once installed give and endless amount of trouble—more, in fact, than the added price of a quality tank—a Wayne tank. Wayne tanks for above or below ground storage are built to stand any service, and to efficiently, safely and continually render satisfaction. The price is determined solely by the cost of finest materials fashioned by picked mechanics. Every Wayne tank is built according to Underwriters' Rules and with the definite idea of making a permanent, satisfied customer of every owner."

SCALE—AND THE CURE

Boiler scale cannot be prevented from forming, but there is a way of removing it easily.

The answer is to use

DIXON'S PIONEER
BOILER GRAPHITE

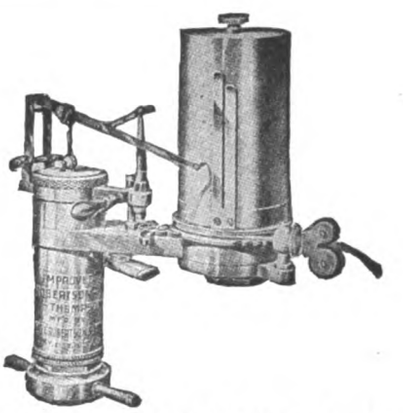
It is introduced into the boiler feed water. The particles work their way through the minute fissures of the scale, lubricate the scale, so to speak, and greatly facilitate subsequent cleaning by ordinary methods. Once clean, scale cannot again burn fast to the metal.

Both time and labor costs are cut in half, and cleaner boilers are the result.

Graphite has not taste or odor, nor is it soluble. It does not prevent the use of live steam for cooking or washing. It does not destroy gaskets, valves and fittings on steam lines.

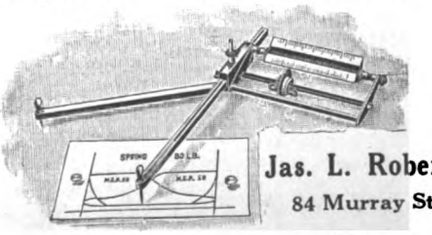
Write for Booklet No. 75-T and further information.

Made in JERSEY CITY, N. J., by the
JOSEPH DIXON CRUCIBLE COMPANY
ESTABLISHED 1827



You can't feel your Engine "Pulse" without a good Indicator—Here's the Robertson-Thompson and the Willis Planimeter. THE A. B. C. WAY OF REALLY KNOWING to the absolutely accurate and direct figuring of diagrams. THEN YOU KNOW.

The prices for these instruments are lower than you ever thought of. Don't you want to know them?



Jas. L. Robertson & Sons
84 Murray St., New York

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Electric Arc Welding" is the title of Bulletin No. 700, which is issued by the United States Light & Heat Corporation, Niagara Falls, N. Y., and contains interesting information regarding the new aspects of the arc welding process which have developed in the war emergency. The bulletin also contains a detailed description of the apparatus supplied by this company.

"A Revolution in Rivets" is the title of a folder published by the American Flexible Bolt Company, 50 Church street, New York. "For a century no one thought of improving rivets. Indifferent workmanship was an easy explanation for unfilled holes and leaky rivets. Yet boiler makers knew the hole under the head was never tightly filled. In cutting out an ordinary rivet they always cut the head off and drove it out from the head end. This was because that end was always loose in the hole, and it was almost impossible to drive it out the other way. It was tight at one end only. 'American' rivets fill the hole under both heads. Both heads are formed while driving. Sufficient metal is provided to form perfect heads and tightly fill the hole. It avoids the need of calking."

A Testing Sample free is promised by the Central Steel & Wire Company, Department 43, 119 North Peoria street, Chicago, Ill. "Try these specialized welding rods and wire 'on us.' We'll furnish them free to you, paying all express or parcel post charges, too, a sample sufficient to let you prove for yourself our claim—that we have absolutely ascertained the correct analysis for every kind of welding job. Welders long have known that no one or two filler analyses would do for all work. It remained for Swedox to experiment and determine the right analysis for each special variety. Swedox welding fillers are products backed by scientific research—that of the best metallurgists in the country—and by practical every-day demonstration—by 90 percent of the nation's welders, big and small. There's a considerable advantage in using Swedox fillers. In the first place they are uniform in analysis and free from impurities. That means a lot, because it assures you of ideal results in your work, an assurance missing if you use fillers made according to haphazard, unscientific standards. And they're economical because their use reduces the cost of application and of machining. But mainly it's the specialization of Swedox products that makes them the logical up-to-date fillers. Thousands of welders know that, and there isn't a variety of welding job in which they haven't proved satisfactory. We want you to know it. Hence the free offer. Fill out the coupon, pin it to your letterhead and mail to us. In return we'll rush the special kind of filler you name —entirely, as we said before, at our expense from factory to you."

"The Advantages of the Hollow Bolt with the Durability of Ulster Special" are set forth in Joseph T. Ryerson & Son, Chicago, Ill., in a bulletin recently published. "Made from the original solid finished bar of identical Ulster Special that is standard for staybolts on majority of leading railroads—no change in process of its manufacture. Self-inspecting — hole perfectly round and true. Guaranteed not to split in threading or driving, which increases output and reduces shop cost. Will pass all railroad and other standard staybolt iron specifications. Furnished in lengths and sizes used, saves time and cost of cutting, eliminates crop ends and facilitates handling. Once tried the results will justify its continued use."

"The Truth About Galvanizing" is the title of a booklet just published by Wilcox, Crittenden & Company, Middletown, Conn. After a long description of the process of galvanizing the booklet goes on to say: "In order to operate a galvanizing plant to advantage it is essential that the kettles should be worked continuously. Idle kettles means a constant waste of zinc; if allowed to cool off when not in use, heating up is expensive and detrimental to the kettles themselves. Unless a manufacturer has sufficient work to insure continuous operation of his kettles, therefore, it will be found much more economical to have the work done by someone who is in position to specialize on galvanizing. With concerns so situated, we are in an exceptional position to co-operate to mutual advantage. Our facilities for galvanizing are such as are seldom found together in one plant, and enable us to handle such small articles as screws, tacks, washers, etc., or structural steel up to 40 feet in length. With unsurpassed equipment we combine a personnel of unusual capacity, developed through long years of experience in handling an extremely varied range of work. When in the market we should appreciate an opportunity to quote on your requirements. In addition to our galvanizing department we also operate our own brass and gray iron foundries, drop-forging plant, hot tinning department, and a splendidly equipped machine department. All of our departments are open to job work, and we present an opportunity for superior service in connection with the following: Galvanized dropped forgings, galvanized gray iron castings, tinned gray iron castings a specialty, all machined if desired. The advantage of having such work done at one plant—under one management—with one profit—must be apparent to every purchaser. Responsibility is fixed beyond question, and we in turn must insist upon rigid inspection in every department. The possibility of material below standard reaching a customer is accordingly very remote. We believe that the high quality of our output is admitted by all purchasers."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York.

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City.

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

NATIONAL ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 809 Vine St., Camden, N. J.

LIST OF OFFICERS, AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 127 Woodside Ave., Narberth, Pa.
Vice-President—C. E. Deiser, 6124 Navy Road, Philadelphia, Pa.
Secretary—B. G. Barnes, 6 Meadow St., Bath, Maine.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.
Executive Committeemen—G. W. Nash, Washington, D. C.; E. H. Monroe, Washington, D. C.; John Thomson, Bath, Me.

NATIONAL MARINE ENGINEERS' BENEFICIAL ASSOCIATION OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Beauville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

INSTITUTE OF MARINE ENGINEERS INCORPORATED
The Minories, Tower Hill, London

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

FOR SALE
QUICK DELIVERY

Diesel Motor Cargo Vessel "CERRITO." Principal dimensions are as follows: Length 170', Breadth 25', Depth 16', Draft Loaded 10' 6". Speed when loaded 6 to 7 1-2 knots. Single Screw. Powered with a 240 B. H. P. "Nelseco" Heavy Marine Oil Engine.

Now in active trade in Gulf of Mexico Waters. Low operating cost and a money-maker.

For further information write

The New London Ship & Engine Co.
GROTON, CONN.

"Wire your ships against fire"

TRADE
FDW SYSTEM
MARK

AUTOMATIC FIRE ALARM

Fire Detecting Wire Co., Inc.
2 West 45th Street New York
Telephone 3526 Vanderbilt

Wanted—Shipyard Executive

Duties, general supervision with exception of office routine. None considered who had not received a salary in excess of $4000.00 a year prior to 1914. Reply with full record, giving details of education, shipyard experience, salary expected, etc.

Address, Box 516,
care of MARINE ENGINEERING.

Immediate Shipment of materials for the boiler maker is promised in a bulletin issued by the Bourne-Fuller Company, Cleveland, Ohio. Among the materials listed are: Boiler plate, boiler tubes, Climax boiler and tank rivets (½ to 1½ inches, all lengths; ½ to ¾ inch, cold made), blue annealed sheets, staybolt iron, flanged and dished boiler heads, channels, bars, beams, angles, hand punches, steel hoops, plate steel, sheared plates, sheet steel, steel shafting, tees, tool steels, etc.

Publication of "Autogenous Welding" Resumed.—The Davis-Bournonville Company, Jersey City, N. J., writes MARINE ENGINEERING as follows: "The publication of *Autogenous Welding*, which was suspended during the war, has been resumed, and a copy of the July number is enclosed herewith. You will note that this 'Victory Number' is largely devoted to the part played by oxy-acetylene welding and cutting in the war, especially our own end of the business. The acute need of welders led to the establishment of the Davis-Bournonville Institute, and this will be continued. *Autogenous Welding* will from time to time give its readers the news of the Institute's work and process. Also, it will deal similarly with our experimental and research department and the other activities of the Davis-Bournonville Company."

"Ulster Special" Staybolt Iron is described by Joseph T. Ryerson & Son, Chicago, Ill., in a catalogue just published. "Every bar of Ulster Special solid staybolt iron is as perfect for locomotive staybolt service when it leaves the mill as over ninety years' experience can make it—further heating or working cannot improve it. Ulster Special seamless hollow is produced from the solid finished bar without heating or working. This insures the same uniformity and lasting quality that has made Ulster Special standard for staybolt on the majority of leading railroads."

"3000 Holes Between Grindings at Top Speed" is the title of a circular published by the Clark Equipment Company, Buchanan, Mich. "Celfor drills are your solution for maximum production. They will not burn or fuse at the corners and retain a keen cutting edge the longest. A greater chip clearance, due to our special 'twisting' process, allows of more speed and cleaner cutting. Celfor drills are made with shanks one size larger than standard to insure against breakage and tang troubles. Celfor drills are noted for their durability. They are made from a forging of high-speed steel and 'twisted.' This forging and twisting process densifies and hardens the metals, and is the source of satisfaction in Celfor drills. Send for copy of 'Celfor Tools' No. 16."

"Falls Hollow Staybolt Iron" is the title of a circular issued by the Falls Hollow Staybolt Company, Cuyahoga Falls, Ohio. In this circular the company emphasizes the fact that its staybolt iron is rolled in both inside and outside, squeezing the intervening walls to a fine degree of elastic density and preserving the fibers, which in the ordinary method of drilling are mutilated by cutting into the heart of the bolt. This company has been manufacturing hollow and solid staybolt iron more than thirty-five years. It is made in sizes ranging from ⅞ inch to 2 inches O. D., and in various mill lengths, the hollow bars averaging 10 feet, while the solids range up to 22 feet. The law requires a tell-tale hole in the hollow bars of a 3/16-inch area, and to this dimension most of our hollow material is rolled. We also roll bars of the larger sizes, used especially in marine boilers, containing an orifice or hole up to ½ inch diameter. In addition to supplying the long random bars in the rough, we also have unsurpassed facilities for furnishing the individual finished stays, ready for application, in any desired length and square headed, threaded 12 or 10 threads to the inch as specified. Both 'Falls Hollow' and 'Falls Solid' have been standard practice with nearly 100 percent of the railroads of the United States. Certain large foreign railroads specify 'Falls Hollow' exclusively."

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired, and they will be forwarded without additional charge.

Foreman Loftsman, with complete mold loft force open for position with live concern. Sixteen years experience. Capable of taking charge of fabrication and hull construction work. Wonderful opportunity for yard requiring complete mold loft organization. Addres *Wm. J. Eichelroth,* 424 Knickerbocker Ave., Brooklyn, N. Y.

Wanted—A High-Class Service Engineer who is familiar with marine boilers as well as service work. Prefer man well acquainted with marine field both in the construction and engineering end. Excellent opportunity for development. State salary expected and give record of last three positions held. Address *N. B. Herman,* Box 851, Detroit, Mich.

Assistant Loft Foreman desires change. Thorough experience in loft work and management. College education. Long practical experience in drafting room, fabricating shops, production department, and outside construction. Address *Box* 32, care of MARINE ENGINEERING.

Hull Draftsman, college education, four years' naval work, four years' private experience, both coasts. Two years squad chief, desires position with shipyard or allied line. Address *Box* 49, care of MARINE ENGINEERING.

Wanted—A Ship Draftsman at present employed by a steel shipbuilding company in the East, and having spare time available, will make tabulated ship calculations, plotted curves plan, displacement scale or furnish ship or yacht lines to companies or individuals. Charges reasonable. Address *Box* 23, care of MARINE ENGINEERING.

For Sale—Upright Marine Boiler carrying 100 lbs. pressure; marine steam engine, 10x12; condenser pump; boiler pump, etc.; all in A-1 condition. Reason for selling—changing from steam to gasoline. Inquire of *Frank Cooper,* 137 Water street, New Haven, Conn.

Wanted—Position as Chief of Mold Loft in a permanent yard. Have had fifteen years experience in both commerce and yacht construction. My experience has been general and I am a first-class loftsman and mechanic. Can give good references. Address *Loftsman,* care of MARINE ENGINEERING.

Wanted—Drafting at home by expert. Tugs, lighters, schooners, yachts—steel, wood or concrete. Engine installation, alterations, repairs; yard layouts. Joiner details. Terms, $1.50 an hour. *E. Carroll,* 245-A Utica avenue, Brooklyn, N. Y.

Mechanical Superintendent, with broad, practical shop and shipyard experience in building and installation work, wants position. At present have charge of installation and outfitting. Executive ability and thorough organizer. Address *Box* 36, care of MARINE ENGINEERING.

Civil Engineer, fifteen months' experience as ship draftsman, desires employment with shipbuilding firm. Address *Civil Engineer,* care of MARINE ENGINEERING.

Wanted—Five or six first-class experienced marine engine draftsmen and checkers. Address *Adams, Lovell, Burlingham, Inc.,* 90 West street, New York City.

For Sale—One 13-inch General Electric type P. C. thirteen, twenty-ampere, one hundred fifteen-volt direct-current searchlight, complete with rheostat, overhauled and in A-1 condition. Three 67-foot and three 75-foot cargo booms in good condition. Address *Freeport Sulphur Company,* Freeport, Tex.

High-Class Engine Designer Wanted, also draftsmen, tracers and designers for structural and mechanical work on boats, derricks, etc. Good salaries and permanent position to the right men. Address *Chief Engineer, The Dravo Contracting Company,* Engineering Works Department, Pittsburgh, Pa.

Oil Engine Drawings for sale in full sets of standard shop working drawings. For 5,000- and 9,000-ton steamers, four-cylinder, 24 by 36, 1,450 horsepower, by 96 sheets, $1,200; for tugs, four-cylinder, 18 by 27, $1,000, and four-cylinder, 16 by 24, $900. For yachts or as auxiliaries, steel column crosshead type, 10 by 12, $900; 6 by 8, $600; 4 by 5 trunk piston, $300. Address *Fuel Oil,* care of MARINE ENGINEERING.

Designing Engineer—Wanted immediately a Marine Designing Engineer for a responsible and permanent position. Good opportunity for right man. Must be able to take complete charge of specifying, designing and ordering material for steam vessels. Must have good education and experience. Location New York. Address *Box* 74, care of MARINE ENGINEERING.

Practical Marine Foreman and Engineer wishes connection with repair shop. Would act as foreman and invest $3,000 to $5,000. Locate anywhere. References. Address *Box* 66, care of MARINE ENGINEERING.

Shipbuilder, with 18 years' experience in leading yards and New York harbor work, seeks responsible position as designer or naval architect, or would act as consulting engineer to parties contemplating extension of present fleet. Address *Designer,* care of MARINE ENGINEERING.

Wanted—Several experienced mechanical draftsmen; preferably men who have had thorough experience in the designing of marine Diesel or steam engines of large sizes. State age, experience and salary expected; permanent position. Address *Electric Boat Company,* Groton, Conn.

Diesel Engineer—Wanted immediately for a responsible and permanent position a competent and experienced Diesel Engine Engineer. Must be able to take complete charge of Marine Diesel engineering and designing work. Location New York. Address Box 85, care of MARINE ENGINEERING.

Designing and Detail Draftsmen—For permanent positions with large manufacturing concern in New England. Men with electrical, steam engine, turbine or special machine experience. Apply, giving age, experience, education and salary expected by addressing *Chief Draftsman, Box No.* 90-X, care of MARINE ENGINEERING.

Wanted—Technical Graduate familiar with Marine Engineering specifications, first-class marine engine, electrical and pipe draftsmen. Permanent positions for right men in shipyard near New York City. Address Gravesend, care of MARINE ENGINEERING.

"Set Your Own Standard of Quality" is the title of a circular issued by the Cleveland Punch & Shear Works Company, Cleveland, Ohio. "And when you have, then carefully and critically examine the materials and workmanship used in the manufacture of the small tools made by us, you will find that these small tools reflect a perfect factory organization of skillful workmen and embody the very best materials possible to procure. In fact, the constantly increasing demand and our reputation gained by thirty years' experience as manufacturers of dependable small tools, is assurance that the Cleveland Punch & Shear Works Company's small tools will 'make good' in actual performance. From an economical standpoint the Cleveland system of standardization punches should be of interest to you."

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Even Where Fuel Costs Nothing It pays to Use 85% Magnesia

THE Kaul Lumber Company's saw mill at Kaulton, Ala., is a model of modern industrial efficiency.

The 2,000 H P boiler not only provides the power for all mill operations but also furnishes an ample supply of steam for the drying kilns and other buildings.

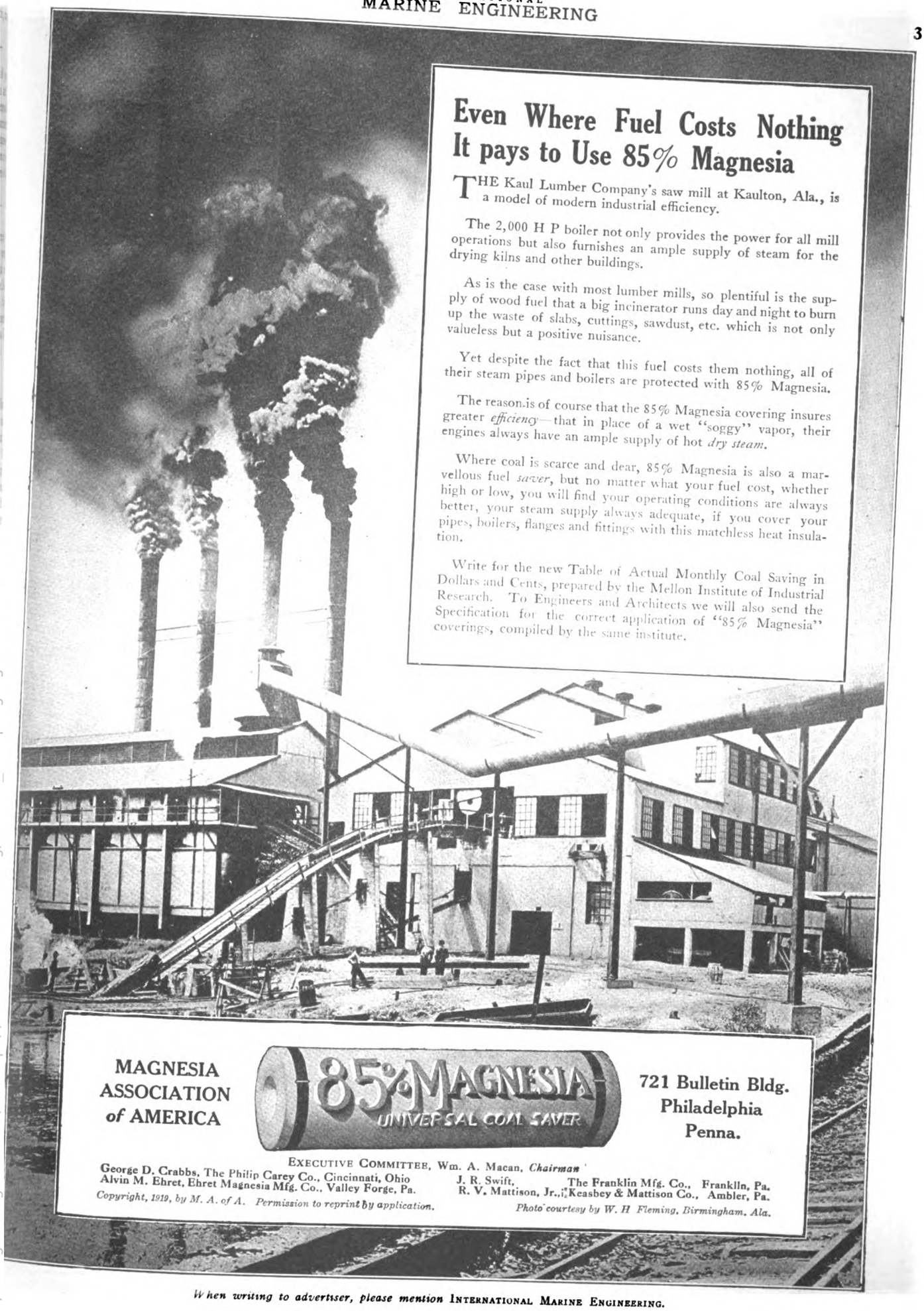
As is the case with most lumber mills, so plentiful is the supply of wood fuel that a big incinerator runs day and night to burn up the waste of slabs, cuttings, sawdust, etc. which is not only valueless but a positive nuisance.

Yet despite the fact that this fuel costs them nothing, all of their steam pipes and boilers are protected with 85% Magnesia.

The reason is of course that the 85% Magnesia covering insures greater *efficiency*—that in place of a wet "soggy" vapor, their engines always have an ample supply of hot *dry steam*.

Where coal is scarce and dear, 85% Magnesia is also a marvellous fuel *saver*, but no matter what your fuel cost, whether high or low, you will find your operating conditions are always better, your steam supply always adequate, if you cover your pipes, boilers, flanges and fittings with this matchless heat insulation.

Write for the new Table of Actual Monthly Coal Saving in Dollars and Cents, prepared by the Mellon Institute of Industrial Research. To Engineers and Architects we will also send the Specification for the correct application of "85% Magnesia" coverings, compiled by the same institute.



MAGNESIA ASSOCIATION of AMERICA

85% MAGNESIA UNIVERSAL COAL SAVER

721 Bulletin Bldg.
Philadelphia
Penna.

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D. Crabbs, The Philip Carey Co., Cincinnati, Ohio
Alvin M. Ehret, Ehret Magnesia Mfg. Co., Valley Forge, Pa.
J. R. Swift, The Franklin Mfg. Co., Franklin, Pa.
R. V. Mattison, Jr., Keasbey & Mattison Co., Ambler, Pa.

Copyright, 1919, by M. A. of A. Permission to reprint by application.

Photo courtesy by W. H Fleming, Birmingham, Ala.

Generated on 2024-09-12 08:20 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

"Thacher Bronze Propellers" is the title of a handsomely printed and illustrated pamphlet of 12 pages, published by the Thacher Propeller & Foundry Corporation, Albany, N. Y. "The moderate size semi-steel Thacher Patent Process Propeller Wheel shown in photograph has just come from the foundry and is being balanced preparatory to being bored and keyseated. It is accurate in every detail and requires no machining or chipping other than the bore and keyway for driving shaft. The tip of every blade is true to a circle equal to propeller diameter. The pitch of every blade is accurate and true with the pitch of the other three blades. The thickness of each blade at a given point on an arc corresponds by caliper measure with the thickness at a similarly located point on every other blade. There are no measurable variations in any blade. The wheel as cast is more acurate than the present machine-finished wheel and has the further strength advantage of retaining the casting skin."

The Waterbury Rope Hand Book is a profusely illustrated volume of 220 pages, published by the Waterbury Company, 63 Park Row, New York. This hand book explains the advantages of fibreclad construction and the rest of its 220 pages hold all other rope information you could wish for. "Waterbury fibreclad wire rope is a wire rope each strand of which is served with tarred Russian hemp marline. This fibre covering prevents the shaving and wear of the strands during flexing movements. The tarred marline covering also prevents the wire strand of rope from moisture or water, eliminating the possibility of rust and also preventing foreign matter working through to the wire strands. It is claimed for Waterbury fibreclad rope that it is as strong a manila rope, three times its size and that it weighs only half as much; that it is as flexible and as easily manipulated as manila rope and less cumbersome, that it won't rust because of the marine serving which retains the internal lubrication of the wire strands and that it will outwear either bare wire or manila rope under all ordinary conditions and so is more economical."

The Bowser Oil Storage Service is described in a folder published by S. F. Bowser & Co., Inc., Fort Wayne, Indiana. "We are the pioneers in the manufacture of improved oil handling devices and the original patentees and manufacturers of the famous Bowser self-measuring hand and power-driven pumps, large and small tanks, gasoline and oil storage and distributing systems, self-registering pipe line measures, oil filtering and circulating systems, dry cleaners' systems, etc. All goods fully guaranteed. Upon receiving the barrels of oil from the oil company, the oils are emptied by gravity into leakproof storage tanks, thereby eliminating loss of oil on account of leaky barrels. The Bowser oil gauge tells the approximate number of gallons contained in the tank, thereby checking up short barrels and invoice mistakes. The easy one-man Bowser method of emptying barrels with cradle, track and dash, drains the barrel absolutely, thereby eliminating the loss due to oil being left in the bottom of the barrel."

The "Liberty V" Ship Telegraph is described in a circular published by Chadburn (Ship) Telegraph Co., of America, Department L. V., 5th Avenue and Liberty St., Troy N. Y. "The newest and most efficient of all ship telegraphs—produced by American Labor working under modern ideal conditions—and at a cost to you of nearly 50 per cent less than an instrument of lower efficiency used to cost. We had the finest telegraph in existence (over 12,000 merchant ships carry it exclusively): to-day, thanks to American genius, we are in a position to offer this telegraph at a remarkably low price. Made in all sizes and for every purpose. We are now manufacturing unusually high class lines of binoculars, compasses, sextants and sounding machines at prices that will interest you. Remember that Chadburn quality is the leading feature of every product of this organization. Estimates furnished. Prompt deliveries."

Convenient Producing Plants

THE BACKBONE OF PREST-O-LITE SERVICE

NATION-WIDE Prest-O-Lite Service brings straight to the user's hands a single cylinder of highest temperature gas—or hundreds of cylinders—

Such a Service must have a backbone strong enough to carry the tremendous load of national demand, flexible enough to meet the ever-changing needs of any one of an army of users.

Buffalo, N. Y.—A new Prest-O-Lite charging plant

40 Plants and Warehouses Supply

Prest-O-Lite

DISSOLVED ACETYLENE

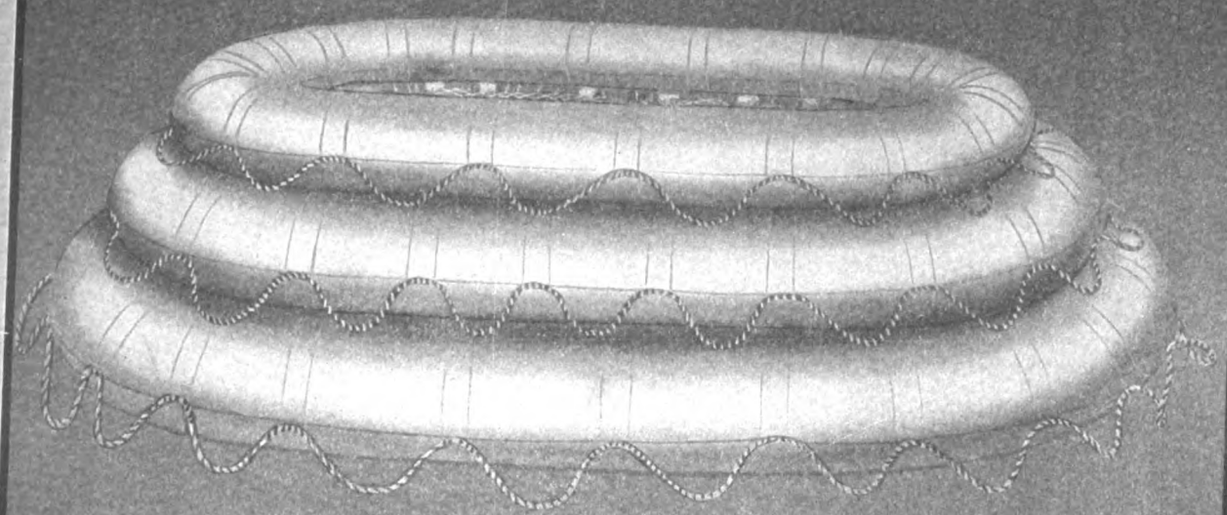
Wherever you may be located, however large or small your requirements, there is an efficient Prest-O-Lite producing plant near—ready to serve you quickly as well.

THE PREST-O-LITE COMPANY, Inc., General Offices 30 E. 42nd St., New York
Kohl Building, San Francisco
In Canada—Prest-O-Lite Co. of Canada, Limited, Toronto

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. 50 E. 42nd Street, New York

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:26 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Manufacture and Advantages of National Welding Scale-Free Pipe" is the subject of National bulletin No. 7, published by the National Tube Co., Frick Building, Pittsburgh, Pa. "When one considers that the introduction of wrought pipe dates back less than one hundred years; that the use was then confined almost entirely to gas and water; that today the varied uses and applications can scarcely be enumerated and the production runs into millions of tons—it must be acknowledged that wonderful progress has been made in the art of pipe manufacture. The past fifty years in particular have seen remarkable development in the wrought tubular industry, including the tonnage used, the capacity of mills, diversity of pipe service, and improvement of the material itself. During this period practically all improvements in wrought pipe manufacture have been confined to steel tubular products, and the result is that about 90 per cent of the wrought pipe used today is made of steel. The deserved popularity which steel pipe has attained is not the fruit of a haphazard program among pipe manufacturers. There has been no radical or spasmodic branching out by individual organizations in the effort to establish new fundamentals. The basic principles of the art have not been changed much if at all in the last thirty years; but the fact cannot be denied that wonderful improvements have been made in the industry and the product by modern application of the time-tried methods and processes. The same principles of steel making are recognized by all steel pipe manufacturers—all steel pipe is welded in practically the same manner—yet there are substantial differences in pipe. The factors which control the characteristics and properties, and thus produce these differences in various tubular materials, are the facilities of the manufacturer; the special processes supplementing the fundamental ones; the availability and quality of raw materials; the ideals and skill of the men in the organization—their capacity for genuine accomplishment. The career of National Tube Company is one that has been marked by a long series of accomplishments through which the steel tubular industry as a whole has benefitted substantially, and through which 'National' pipe has become a recognized standard among wrought tubular products."

The Klaxocator System for locating anyone of your important men in any part of your shipyard is described in a circular published by the Industrial Divsion of the Klaxon Company, Metropolitan Tower, New York, "It consists of the Klaxocator—placed near your telephone switchboard—and a number of electric signals so scattered in your plant that, when sounded, they are heard everywhere. The Klaxocator automatically operates these signals in such a manner as to sound various code numbers. Each of your important men is assigned a code number corresponding to a number on the Klaxocator dial. When a man is wanted the switchboard operator turns the dial to his number and pulls the lever. The proper signal is sounded at once in every part of the plant to tell him he is wanted. He lifts the nearest telephone receiver and is connected by the operator with the man who wants him. Your workmen need no longer be disturbed by messengers or by the switchboard operator with questions as to the whereabouts of this or that man. In any emergency there is no rushing about—no fussing—no waiting. With Klaxocator System in your shipyard your men are always instantly available. Our engineers will be glad to furnish plans and estimates on your requirements. Write to us today."

Dunn Stockless Anchors are described in a bulletin published by the American Steel Foundries, Chicago, Ill. "Security is the thing considered of most importance by all shipowners. Therefore a ship's anchors should not be neglected, for upon them security often depends. Should they fail to hold, should they foul, should they break—disaster is possible. Dunn Stockless anchors have proved their thorough reliability by years of unequaled service on every class of vessel. They lie snugly in the hawse pipe, ready to be let go. They eliminate all chance of fouling. And they have a holding power that is unfailing under all conditions."

IRON STEEL METALS

ARTHUR C. HARVEY CO.

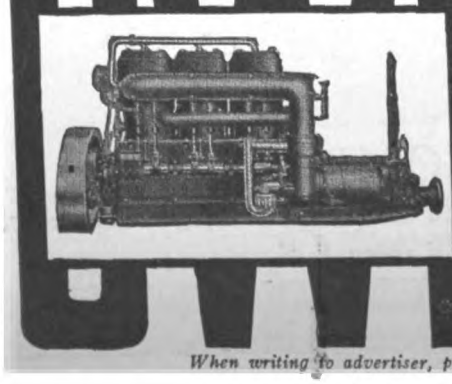
374 Congress Street Boston, Mass.

Tel., Main 7000

BOILER TUBES, RIVETS, PLATES, TANK STEEL, FLOOR PLATES, BARS, SHEETS, STRUCTURAL SHAPES, COLD ROLLED SHAFTING.

WE ARE EQUIPPED TO CUT TO SIZE ANYTHING CARRIED IN STOCK.

POWER



WOLVERINE

"The Motor With the Bore & Stroke"

PLUS FUEL COST REDUCED

From 70 to 80 per cent without sacrificing reliability, flexibility or control. Perfect combustion on kerosene or lowest grade of Coast Distillate.

5 to 200 H. P. — 1 to 6 Cylinders

Ask for Catalog 73.

WOLVERINE MOTOR WORKS, Bridgeport, Conn.

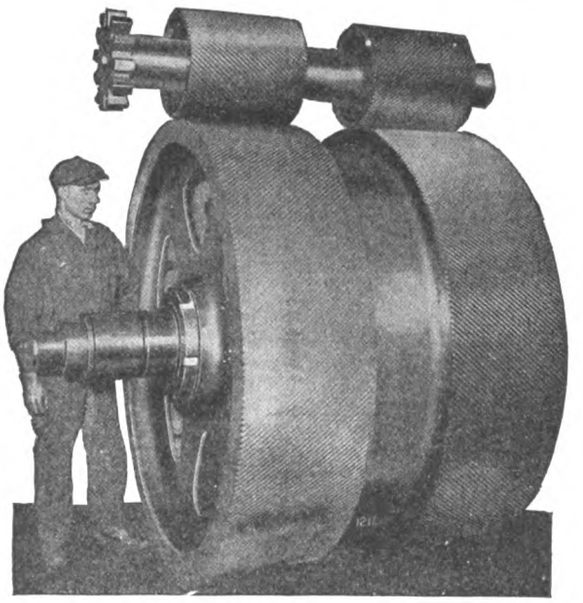
When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

A 100% RECORD



OVER one hundred De Laval Marine reduction gears ranging in capacity from 750 to 13,500 H. P. are in actual successful service, a number of which are installed in vessels which have each run over 100,000 miles.

THERE has not been a single case of trouble reported with any De Laval reduction gears, which, without exception, are characterized by their exceedingly quiet operation, high efficiency and absence of wear.

QUIET OPERATION

THIS record is the result of the many years of experience of the De Laval Company in the production of high grade, high speed reduction gears.

OUR record warrants the earnest consideration of ship owners and ship builders planning new construction.

PROMPT shipment can now be made on geared turbine drives for all capacities and conditions of service, as the great demand of the Government for our products is practically over.

ASR FOR OUR CATALOG M 46

DE LAVAL STEAM TURBINE CO.

400 NOTTINGHAM WAY TRENTON, N. J.

When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:21 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"**What is Haskelite?**" is the title of a pamphlet published by the Haskelite Manufacturing Corporation, 133 West Washington St., Chicago, Ill. Haskelite is stated to be an ideal material for panelling on board ship and for similar purposes. The following is a partial description taken from the pamphlet. "Haskelite is an engineering material. It is the very first plywood ever produced with that idea in mind. It is designed with known engineering values. An engineering material has definite properties such as strength, elasticity and hardness that can be relied upon to such an extent that structural and other parts can be so designed from this material that their strength and other properties will be appropriate to the loads which the parts are expected to carry, or to the service which they are expected to give. Shingles are not used in design to carry particular loads; they are not structural parts and their material is not an engineering material. The rafters that support the roof are made sometimes of one size and sometimes of another, depending upon the loads that must be carried and upon the manner in which the rafters are supported. Rafters are structural parts, the material of rafters is an engineering material. Haskelite has definite properties of strength, elasticity, etc. Haskelite may be made up in various ways appropriate to different conditions. When we were in the midst of war preparations a designing table was issued to firms interested in airplane manufacture which showed 440 varieties of Haskelite appropriate for such work, and for each variety there were given the thickness, the weight per 100 sq. ft., and the strength in two directions."

Red Seal Kneadable Marine Metal Packing is described in a folder published by John Simmons Co., 102 Center St., New York. "Red Seal is a plastic metallic composition that is easily compressible into any type of stuffing box, gland, valve, cock, tap, etc., forming an impervious non-hardening metallic sleeve of absolute uniformity throughout. Red Seal is the most economical method of packing, as any fresh material will readily combine with the old into an homogeneous body. If desired, is easily and quickly withdrawn and every particle can be used again. It retains its qualities under any pressure, friction being reduced to a minimum. Red Seal by its very simple application, durability and imperviousness, assures the highest efficiency and utmost economy."

Self-Equalizing Expansion Joints are described in catalogue 18, just issued by E. B. Badger & Sons Co., 63 Pitts St., Boston, Mass. "Self-equalizing expansion joints distribute stress uniformly. This is an advantage that cannot be emphasized too strongly. The equalizing rings and lip on flanges limit the amount of compression on each corrugation, (first) insuring undue strain on any part, (second) high factor of safety, from standpoint of strength. Corrugations on joints 6 in. and over, 2¼ in. deep; corrugations on joints under 6 in., 1⅛ in. deep. There is no cracking, jamming or pipe distortion, because of the scientific design. There is no stuffing box or sliding member. Badger joints are dependable under all pressures."

"**Cross Drum Water Tube Boilers**" is the title of a 22-page illustrated catalogue published by E. Keeler Co., Williamsport, Pa. "The Keeler Water Tube Boiler is offered to discriminating steam users as the product of fifty-five years experience in constructing boilers of all standard types. Keeler quality is the result of a consistent effort to place Keeler boilers among purchasers who require the best that can be produced. To interest such purchasers we have met low price competition by producing an efficiency, that in a few years of service, will more than absorb the difference in the first cost. The character of the equipment shown in the following pages is partly the result of careful observation of each part or fixture in actual service. There is no feature of any boiler in the market today that is any more efficient or reliable than a similar feature of the Keeler water tube boiler. The extreme care used in the construction of these boilers can only be appreciated by a visit to our shop or by an inspection of the completed work. A thoroughly modern shop equipment, a progressive policy, and long experience enables the E. Keeler Company to meet the requirements of the most exacting specifications."

REG'D TRADE MARK

INTERNATIONAL

COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS

In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually

Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING

INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N. Y.

VALK & MURDOCH COMPANY

CHARLESTON, S. C.

Builders of Marine Boilers, Scows and Lighters

8,000-Ton Floating Drydock	1,500-Ton Marine Ry.	500-Ton Marine Ry.
Length on Blocks 440′	Length on Blocks 220′	Length on Blocks 100′
Depth over sill 22′	Depth over Blocks 14′	Depth over Blocks 7′

Marine Repairs a Specialty

STRATFORD SPECIAL NO. 1 MARINE OAKUM

receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. It meets the requirements of all of the United States Government specifications. For years we have guaranteed the quality of each bale to be standard of excellence and returnable at our expense if otherwise. More of this grade Oakum has been used by the United States Government and its contractors than all other makes combined, yet, not a single bale has been condemned or rejected, whereas it has replaced the condemned Oakum of almost every other make. Our experience, quality and service are worth more to you than we ask.

GEORGE STRATFORD OAKUM COMPANY Jersey City, N. J.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sun Marine Oils

HAVE PROVED THEIR WORTH

QUALITY SERVICE

SUN OILS

RELIABILITY EFFICIENCY

Good Ships deserve Good Oils

Let our engineers solve your engine room troubles

SUN COMPANY

1428 So. Penn Square - - - PHILADELPHIA, PA.

STOCKS CARRIED AT

New York City Boston Philadelphia Baltimore Pittsburgh Cincinnati Buffalo St. Louis
Chicago Minneapolis Toledo Newark Newport News Detroit Atlanta New Orleans Sabine

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

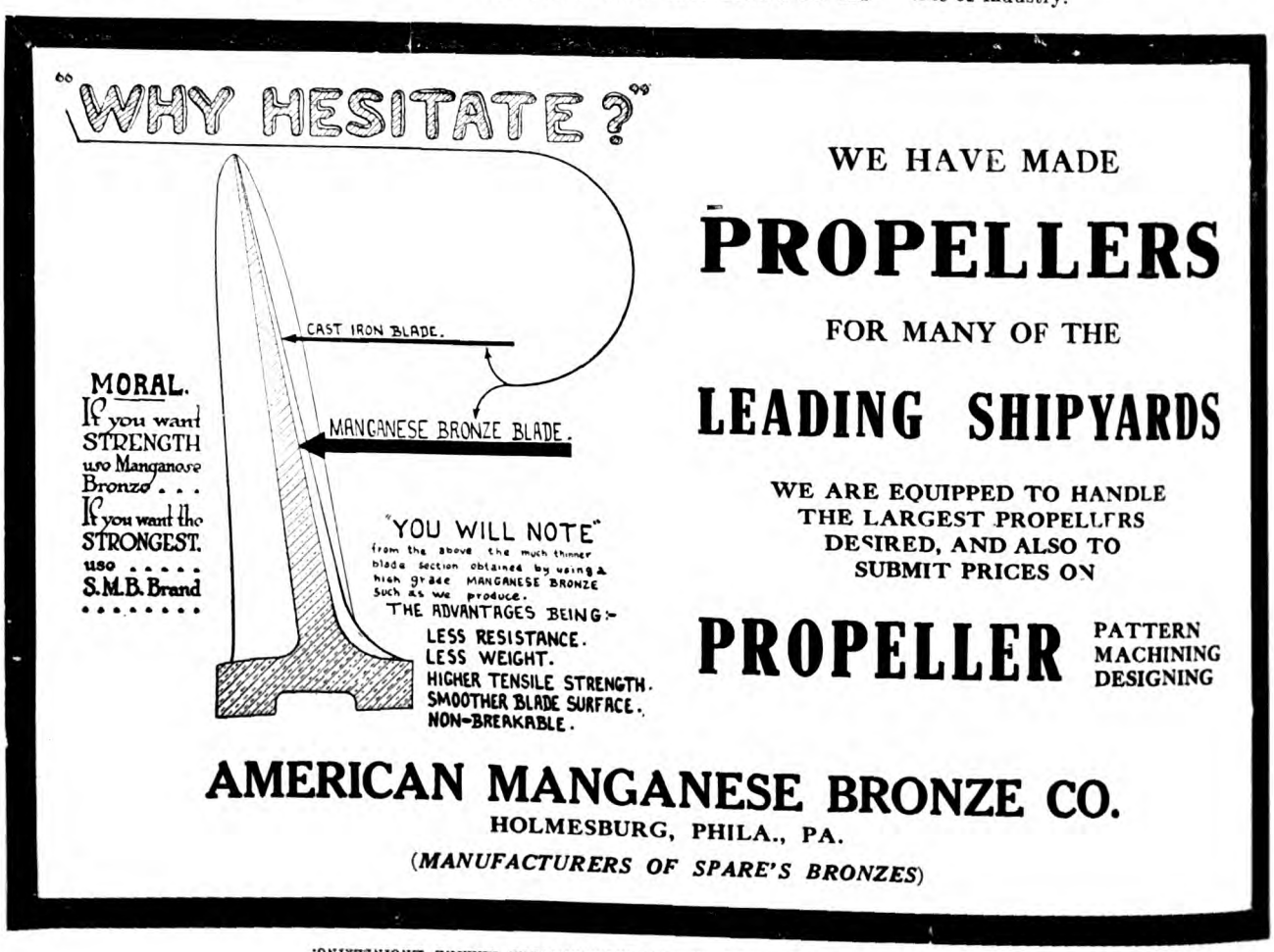
Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

An "Oil Fuel Installation" catalogue has just been published by Messrs. J. Samuel White & Co., Ltd., East Cowes, Isle of Wight, England. This is a handsomely illustrated booklet of 44 pages, from which we quote as follows: "Owing to the developments in the supplies of liquid fuel, the employment of same for steam raising for marine and industrial purposes is becoming of increasing importance. The advantages of liquid fuel for steam raising as compared with coal—or wood—are very great, and may be summarized as follows:—An increase in boiler efficiency, owing to the clean condition in which the boiler heating surface can be maintained, and the completeness of combustion obtainable with a good system of oil firing; high calorific value:—1 lb. of oil fuel averages 19,500 B. T. U. as compared with 12,500 B. T. U. for average coal. This is due to the inherent high calorific value of the hydrocarbon constituents and to the high purity of oils, the non-combustible matters usually being almost negligible; a constant and equal distribution of heat in the furnace, and as there are no fire doors to be opened, the cooling effect of a large volume of air passing over the furnace is avoided. Control of the air supply; a reduction in the cost of handling the fuel, as this can be done with a pump or pumps. A large reduction of stokehold staff, the number of firemen not being required as would be necessary for coal fired boilers. One man can regulate the burners of a considerable number of boilers; no wear and tear of grate bars; no dust, no ashes, and no clinker; when once arrangements have been made, the storage of oil fuel is simpler than the storage of coal, and oil does not deteriorate. One ton of oil averages 38 cubic feet to an average for coal of 43 cubic feet. The high calorific value and low stowage value enable a greater number of heat units to be carried or stored per cubic feet of space than for coal in the ratio of 1.7 to 1; the control of the steam production is easier, more effective, and more rapid than with solid fuels. Instantaneous ignition, and extinction of the fire; no smoke. The system herein described is that of pumping oil through the burners at a pressure of about 100 to 180 lbs. per square inch, and is recommended on account of its simplicity, higher efficiency, and greater applicability to high rates of evaporation, as compared with other systems. In this system there is no loss of fresh water, as is the case where steam is used as a spraying or atomizing agent."

Marine Boiler Logic.—The Heine Safety Boiler Co., St. Louis, Mo., has just completed the printing of "Marine Boiler Logic," a 69-page booklet dealwith the fundamental design of marine cargo carriers. The booklet was written by Chas. H. Stoddard, consulting marine engineer of the Heine company. The main part of the booklet relates to the design and construction of Scotch and water tube boilers for marine purposes. Evaporative capacities are worked out for the two types, using coal or oil as fuel, with natural or forced draft. The booklet contains also a discussion of power and speed of cargo vessels, formulas being developed showing the relation between boiler and prime mover capacity, and the dimensions of the hull. In making these computations, the method developed by Rear Admiral D. W. Taylor of the United States Navy, has been used, with certain modifications suggested by Mr. Stoddard's experience. The last part of the booklet is devoted to a description of the construction and operation of the cross-drum type of water tube boiler developed by the Heine company for marine service.

"Certainty" is the title of a bulletin issued by the Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N. Y., "Within the small compass of a bolt or nut there are factors which can make or mar the efficiency of a big machine. No assembly of metal parts has any security against accident, beyond that which lies in the integrity of its bolts and nuts. A flaw here can have disastrous consequences. You can afford no speculation, where efficiency is in the balance. Certainty is a necessary safeguard. There is nothing speculative about the quality of 'Empire' bolts and nuts. Their staunch virtues have become a world wide tradition, through 74 years of service in every conceivable line of industry.


"WHY HESITATE?"
CAST IRON BLADE.
MANGANESE BRONZE BLADE.
MORAL.
If you want STRENGTH use Manganese Bronze . . .
If you want the STRONGEST. use . . . . .
S.M.B. Brand
"YOU WILL NOTE"
from the above the much thinner blade section obtained by using a high grade MANGANESE BRONZE such as we produce.
THE ADVANTAGES BEING:-
LESS RESISTANCE.
LESS WEIGHT.
HIGHER TENSILE STRENGTH.
SMOOTHER BLADE SURFACE.
NON-BREAKABLE.
WE HAVE MADE
PROPELLERS
FOR MANY OF THE
LEADING SHIPYARDS
WE ARE EQUIPPED TO HANDLE THE LARGEST PROPELLERS DESIRED, AND ALSO TO SUBMIT PRICES ON
PROPELLER
PATTERN
MACHINING
DESIGNING
AMERICAN MANGANESE BRONZE CO.
HOLMESBURG, PHILA., PA.
(MANUFACTURERS OF SPARE'S BRONZES)

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:10 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

New Jersey Zinc

The world's standard for Zinc products

ZINC PLATES

Our numerous mines yield such a comprehensive variety of zinc ores that we are able to exactly meet every zinc requirement.

Our rolling mills at Palmerton, Pa., are now prepared to furnish zinc ship plates and boiler plates of any desired dimensions and thicknesses and of just the right quality to best serve their purpose.

This organization with its extensive resources and its seventy years of experience in the development and production of zinc products, has unusual advantages in meeting the needs of the ship building industry.

THE NEW JERSEY ZINC COMPANY, *160 Front Street*, New York

ESTABLISHED 1848

CHICAGO: Mineral Point Zinc Company, 1111 Marquette Building

PITTSBURGH: The New Jersey Zinc Co. (of Pa.), 1439 Oliver Building

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"A Suggestion for the Chief Engineer" is the title of an illustrated circular which has just been published by the Columbian Bronze Corporation, 50 Church Street, New York. "You have heard it said that bronze propellers eat away the stern frame of a steel ship. You probably are familiar with the reasons for such a statement, but in case you are not, the following may be of interest, particularly the portion which refers to the method of preventing action between bronze propellers and the stern frame. Whenever steel or iron and zinc (which constitutes about 40% of the metal known as Manganese bronze) come in close proximity to each other in a liquid, such as salt water or impure waters of any character containing light acids, sewage, etc., an electric battery is created, the action of which is known as galvanic action. This causes the zinc and the iron in very finely divided particles to detach themselves from their respective bodies, thus in time causing noticeable ruptures in the surface of the material. There is a definite point of distance between two such bodies of metal where this galvanic action ceases, and to prevent the action it is necessary to separate the metals by a greater distance than the minimum referred to. Practically the entire damage that might occur to the stern frame of a bronze propellered ship occurs when the ship is lying in port and in waters that are decidedly acidulous in their composition. In an attempt to overcome this action, zinc plates are many times fastened on the stern frame, and by such an installation of zinc plates the zinc in the bronze is not acted upon nor is the steel in the stern frame. A better way, however, to reduce this action, is to separate the bronze blades from the stern frame by stopping the shaft so that the blades will be in a position indicated in the above photograph. We suggest that you mark your shaft in such a way that when it is registered with any stationary point you may select, the blades are in the position shown, and that whenever you are in port you make it a rule to invariably rest your engine in this position. This will practically eliminate the galvanic action referred to and give greater life to the ship."

Plastic Arc Welding a Steamboat Cast Iron Cylinder. A description of how this is done without dismantling, pre-heating, annealing, etc., is given in a circular published by the Wilson Welder & Metals Co., 2 Rector St., New York. "The Plastic Arc method produces a mechanically sound weld, having the strength and ducility necessary to withstand severe strains to which important ship parts are subjected, at a lower cost than other methods or systems of welding. The Wilson plastic arc welder is particularly adapted for heavy repair work, also boiler plate, cast steel, cast iron, copper, brass and aluminum, etc. Cast iron can be successfully welded without showing a line of demarcation between the original and the added metal."

Buffalo Double Suction Impeller Multistage Centrifugal Pumps are described in bulletin 952A, published by the Buffalo Steam Pump Co., Buffalo, N. Y. The Buffalo "Class R. D. S." multistage pump is stated to be ideal for boiler feeding as it has a very flat horsepower characteristic and maintains high efficiencies over a wide range of capacities and boiler horsepowers. These pumps are built with capacities up to two thousand gallons per minute and pressures as high as four hundred pounds. "Buffalo Class R. D. S." multistage double suction impeller centrifugal pumps are a special development of all the best features in pump design, selected during our long experience as pump manufacturers, and are designed and built to meet the requirements of the most exacting service. These pumps are being used by large manufacturing concerns, public service corporations, city water works, and the United States Government. We particularly commend their investigation by discriminating engineers and users requiring pumps for public water supply, municipal and private fire service, boiler feeding, mill and factory water supply, or any other service where thorough reliability and high efficiency are important considerations."

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE— WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

FOR SALE

Triple Expansion Marine Engine 18" x 32" x 54"—42" stroke. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾" stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"The Buda-Ross Electric Light Plant" is the title of a booklet issued by the Buda Company, Railway Exchange Building, Chicago, Ill., manufacturer of the Buda motor and supplies for mill, mine, and railroad. The booklet referred to shows the one kilowatt and the one-half kilowatt steam turbo-generator electric light plant manufactured by the Buda Company for lighting small industrial plants using a steam boiler, small steam boats, dredge boats, steam shovels, well drilling rigs, small mines, small saw mills, cotton gins, and any other industry using a steam boiler where the lighting requirements do not run over one kilowatt. The plant is an unusually small one for a steam turbo-generator plant, the smaller size having a capacity of one-half kilowatt and the larger size one kilowatt, making it adaptable for lighting small plants and portable outfits. The steam turbine and the electrical generator are built compactly into one unit. The speed is controlled by an automatic governor and the field coils of the generator have a compound winding which keeps the voltage uniform, on any lamp load ranging from zero to the full capacity of the plant. This makes the operation of the lighting plant entirely automatic, requiring no other attention than turning on the steam when the lights are needed and turning off the steam when lights are no longer needed. The Buda company began manufacturing small steam turbo-generators for locomotive headlight service about six years ago. The use of the small steam turbo-generator has grown into many industries and the demand for this kind of a lighting plant has grown to such an extent that the manufacturers have made some recent improvements in it, enlarged the facilities for production, and will market it generally thru dealers as one of the main line of Buda products.

"Marine Boiler Logic" is the title of a 56-page profusely illustrated catalogue published by the Heine Safety Boiler Co., 5322 Marcus Ave., St. Louis, Mo., "This book is issued for the purpose of calling to the attention of marine people generally the fact that the Heine Safety Boiler Company has definitely entered the marine boiler field. Inasmuch as the problems which have arisen in the past few years and which are even now paramount, are almost exclusively connected with cargo carriers, the technical discussions herein are confined to ships of this class, but the boilers are not, of course, limited to use in such boats. They may be used in any and every sort of steam propelled vessel. The Great War has been the cause of bringing into existence many new shipbuilding yards throughout the United States and this has presented opportunities for many young men to assume responsibilities of an engineering nature. For these men and for ambitious craftsmen everywhere, whose sights are upon something higher than the jobs they hold, this publication in intended. That it may be of real value to those men is our wish. That it may be of interest to others is our hope."

"Nickel and Its Products" is the title of a neat booklet published by the International Nickel Co., 43 Exchange Place, New York. The purpose is to convey to buyers in a concise manner a description of the company's nickel products and it is intended to serve as a guide when forwarding inquiries or when soliciting information about nickel. The pamphlet contains a brief history of the nickel industry in America. "The International Nickel Company maintains a well organized technical staff and is equipped with laboratories and facilities for testing and research work. This Department stands ready at anytime to give the benefit of its knowledge and experience and to co-operate in solving any problems relating to the properties and uses of nickel and its products."

Rome Hollow Staybolt Iron is described in a circular issued by the Rome Iron Mills, Inc., 30 Church street, New York. "Rome Hollow is an iron that is made hollow at the right time—when the iron is made. Bars are rolled to standard length—12 to 16 feet. You make your own staybolts for each job in the old economical way. Rome Hollow is rolled by the Jenkins patented process. The same men, the same mill, give it the Rome superior quality you've known for fifty years. And remember, every bar is guaranteed."

SCALE—AND THE CURE

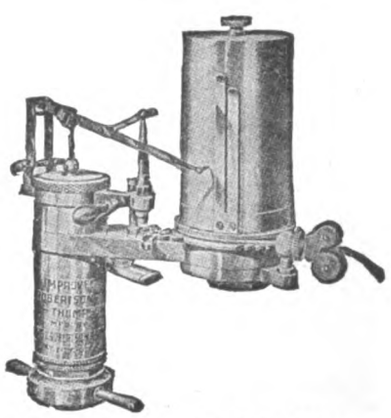
Boiler scale cannot be prevented from forming, but there is a way of removing it easily.
The answer is to use

Dixon's Pioneer
BOILER GRAPHITE

It is introduced into the boiler feed water. The particles work their way through the minute fissures of the scale, lubricate the scale, so to speak, and greatly facilitate subsequent cleaning by ordinary methods. Once clean, scale cannot again burn fast to the metal.
Both time and labor costs are cut in half, and cleaner boilers are the result.
Graphite has not taste or odor, nor is it soluble. It does not prevent the use of live steam for cooking or washing. It does not destroy gaskets, valves and fittings on steam lines.

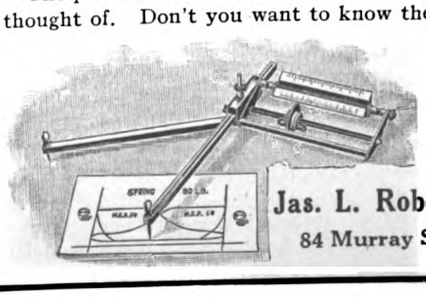
Write for Booklet No. 75-T and further information.
Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE CO.
ESTABLISHED 1827



You can't feel your Engine "Pulse" without a good Indicator—Here's the Robertson-Thompson and the Willis Planimeter. THE A. B. C. WAY OF REALLY KNOWING to the absolutely accurate and direct figuring of diagrams. THEN YOU KNOW.

The prices for these instruments are lower than you ever thought of. Don't you want to know them?



Jas. L. Robertson & Sons
84 Murray St., New York

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:24 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The De Laval Oil Purifier is described in Bulletins No. 102 and 103, issued by the De Laval Separator Co., 165 Broadway, New York. "The De Laval centrifugal oil purifier is simple in construction and operation. This simplicity means long life and freedom from repairs, and is the outcome of over forty years of unquestioned leadership in the manufacture of centrifugal machines. The De Laval oil purifier is the simplest and, at the same time, the most effective means of eliminating grit, dirt, carbon, water and other impurities from crank case and other lubricating oils, instantly restoring them to original usefulness. The oil purifier is built in three sizes, and with electric, belt or direct steam turbine drive. It occupies less than two square feet of space and uses very little power."

Chadburn Ship Telegraphs are the subject of a catalogue published by the Chadburn (Ship) Telegraph Company of America, Troy, N. Y. "The company's plant at Troy, N. Y., is manufacturing all ship telegraph material, engine counters, speed indicators, etc., for the mercantile service, the same as the works in Liverpool, England. We also have a Navy Department manufacturing special instruments for the United States Navy identical with the material manufactured by the Liverpool plant for the British Admiralty. The completeness and location of our factory assures prompt deliveries.

The Wilson Plastic-Arc Welder for use in shipyards and on board ship is described and illustrated in a circular just issued by the Wilson Welder & Metals Company, Inc., 10 Rector street, New York. "The splendid success of the Wilson Plastic-Arc welder in the repair of the German ships has started a general discussion of the advisability and practicability of adopting this method of welding for manufacturing purposes. A special meeting of the technical committee of Lloyd's Register of Shipping was recently held in London to consider this subject in connection with shipbuilding to the extent of eliminating by this method the use of rivets for important structural connections. The Wilson Plastic-Arc welder is as well adapted to manufacturing purposes as it is to repair work. It is very economical in operation, can be used to good advantage in the welding of metal parts of any character. It is also, of course, a ready-repair tool in the case of breakage or damage to cast iron cylinders, valve chests, pipe lines, engine bases and parts. Successful welds can be made in the open or in cramped, confined spaces—anywhere a man and a wire can go. All successful welding depends upon a constant uniform temperature at the weld. The more nearly constant the heat the better the weld. A steady, uniform, predetermined heat is always automatically maintained in Wilson Plastic-Arc welding."

Air Compressors are described in Bulletin No. 3230, just issued by the Ingersoll-Rand Company, 11 Broadway, New York. "There's a little something that enters into the building of an Ingersoll-Rand class 'ER' or 'FR' compressor that makes these small units stand out as superior in the test of racking, constant service. It gives them a distinct place in the field of small machines, make them the first choice when it comes to the selection of an air compressor to fill a place of responsibility. Not only reliable, but also economical. Efficient design minimizes the power requirement and automatic features keep down the need of attendance. When you need a good, small air compressor investigate the Ingersoll-Rand machines."

"Thor" Universal Electric Drills are described in a bulletin just published by the Independent Pneumatic Tool Company 600 West Jackson Boulevard, Chicago, Ill. "Indispensable for all kinds of drilling, reaming and wood boring in the building of automobiles, steel and wood cars, boilers, auto bodies, and in railroad and structural shops, ship and drydock work and machinery repairs. The super-power motor is designed especially for the Thor drill, and posses certain distinctive features resulting in extra power. It is absolutely impossible to stall a Thor drill on any work up to its full rated capacity. They will develop greater power than other drills weighing several pounds more. An aluminum crank case on the small sizes insures lightness and convenience in handling and operating. The Thor is the only portable electric drill made with ball and roller bearings throughout, reducing friction to a minimum and increasing the efficiency."

Automatic Sprinkler Protection on Shipboard is the subject of a special bulletin published by the Marine Department of the General Fire Extinguisher Company, Providence, R. I. "Automatic sprinkler protection has never been largely installed on shipboard, because of certain vital objections raised by shipowners and naval architects. A new type of system, however, has been designed by our engineers which seems to meet all previous objections to this type of protection. This new system is dry pipe, and is still automatic. Water cannot be discharged on account of any accident to the piping system or the sprinkler heads. But water is instantly discharged in case of fire without any human aid. This new type of system makes a great advance in the art of automatic fire protection aboard ship. The type of fire protection that has reduced factory fire risks to practically nothing is now available to the shipowner. Send for our special bulletin giving greater details to this system. We are glad to submit plans, estimates and proposals without cost or obligation."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md.

NATIONAL ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 423 Forty ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tenniswood, 308 Vine St., Camden, N. J.

LIST OF OFFICERS, AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 127 Woodside Ave., Narberth, Pa.
Vice-President—C. E. Deiser, 6124 Nassau Road, Philadelphia, Pa.
Secretary—B. G. Barnes, 6 Meadow Way, Bath, Maine.
Treasurer—J. B. Sadler, P. O. Box 987, Norfolk, Va.
Executive Committeemen—G. W. Nusbaum Washington, D. C.; E. H. Monroe, Washington, D. C.; John Thomson, Bath, Maine

NATIONAL MARINE ENGINEERS' BENEFICIAL ASSOCIATION OFFICERS
National President—Wm. S. Brown, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 356 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 38 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Bienville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow.

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on Tyne.

INSTITUTE OF MARINE ENGINEERS INCORPORATED
The Minories, Tower Hill, London

Generated on 2024-09-12 08:17 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Benjamin Marine Lighting and Sixnaling Apparatus is the subject of a catalogue just published by the Benjamin Electric Manufacturing Company, Chicago, Ill. "In this catalogue are illustrated and described the Benjamin marine lighting and signaling apparatus which are in general use in the shipbuilding industry. The wide experience of Benjamin engineers in laying out and manufacturing electric lighting and signaling apparatus has been recognized by both the engineers and builders in charge of America's ship construction. In the Benjamin line all parts are standardized to the highest point in order that the utmost interchangeability may be possible. Junction boxes may be installed and the receptacles, connecting blocks, or switches, and covers may be mounted later, as the locations require. The same applies to fixtures. In them all parts are interchangeable. Such flexibility insures ease and speed of installation, convenience and protection in purchasing and absence of trouble when the ship is in service. To meet the demand for an insulation of a superior mechanical strength and insulating quality, current carrying parts of Benjamin marine fittings are mounted on bases of high heat molded insulating material. Both interchangeability and improved insulation are but one of a number of features contributing to Benjamin superiority, and are mentioned here because they are the two developments unanimously urged by shipbuilding engineers."

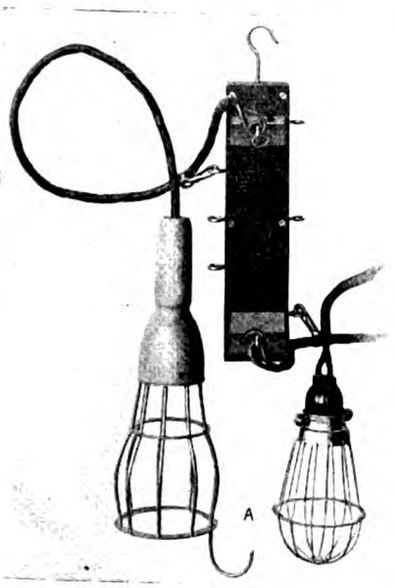
The "Universal" Ladder Step, designed for use on shipboard, is designed in a circular published by the Universal Safety Tread Company, 40 Court street, Botson, Mass. "This ladder step is designed for use on shipboard for all types of naval and merchant vessels wherever an all-metal self-supporting safety tread step, suitably reinforced, is required, as well as for industrial purposes, power house or engine room stairs, and all other similar situations. It combines four most essential features—non-slip efficiency, strength and stiffness, light weight and rust-proof advantages."

Blackmer Marine Pumps are described and illustrated in a catalogue and price list published by the Blackmer Rotary Pump Co., Book Building, Detroit, Mich. "Day and night—three hundred and sixty-five days a year is the schedule of Blackmer marine pumps. Even the severity of salt water and bilge service does not make them falter. Silent yet always ready to perform efficiently. As an element of safety in case of fire they have no equal. The operation of Blackmer rotary pumps creating centrifugal force control the position of the buckets. These buckets thus take up natural wear by swinging further out. Blackmer marine pumps have removable linings of semisteel or hard bronze. New linings can be obtained for a nominal sum and installed quickly and easily without special tools or skilled workmen. Properly installed pumps need no priming. Blackmer rotary pumps are made in all sizes from 1 to 500 gallons per minute."

Dependable Deck Machinery is described by the American Clay Machinery Company, Bucyrus, Ohio, in a catalogue recently published. "This is a dependable line of deck machinery, especially designed to meet exacting Government requirements and built to pass rigid Government inspection. This line is 'Built Right and Runs Right.' So satisfactory was it in design and construction that the largest sales ever made of this class of equipment were sold for Government ships. Each machine is built in quantities on the interchangeable part plan, and prompt shipments are possible. The line includes winches, captans, steering engines, windlasses, etc.

Hanna Riveters are described and illustrated in a catalogue published by the Vulcan Engineering Sales Company, 1755 Elston avenue, Chicago, Ill. "Is the portable riveter you are going to buy designed with an eye toward the convenience of the operator, or is it cumbersome as to hamper and hinder his movements Hanna riveters are made in many types and sizes, but in all of them the same fundamental principles have been retained. They are the result of careful study of actual operating conditions. Used in practically all shipbuilding plants throughout the country. Write for catalogue, which illustrates and describes these machines."

"LITEHOLD" Portable Strip and Plugs



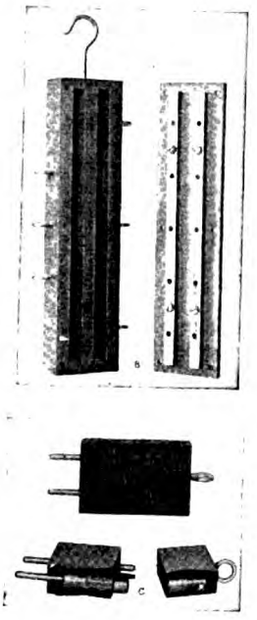
For temporarily lighting Hulls of Ships under construction

Illustration A.—Strip and 2 Plugs showing different type guards.

"B" carbolineum treated maple base with fibre top and brass connections for 5 plugs, Base 10½ in long, 2½ in. wide 1 13/16 in. thick.

"C" hard rubber plug, 1-in. thick 2-in. wide, 3⅛-in. long, with brass prong contacts and midget enclosed fuse. Fuses 2 to 15 amp. as desired. Note supporting hook, also snap hook strain relief for plugs.

OKONITE hard service cord recommended for use with above.



NOVELTY ELECTRIC COMPANY

Manufacturers and Distributors Electrical Supplies
50-52-54 North Fourth Street, Philadelphia
Agents for
Okonite—Wireless Cables—Tapes Holtzer-Cabot—Motors—Generators, Etc.

Generated on 2024-09-12 08:19 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired and they will be forwarded without additional charge.

Wanted At Once—Two first class hull draftsmen. Apply *H. O. Trowbridge*, Naval Architect, Groton Iron Works, Groton, Conn.

Chief Engineer Wanted—Familiar with marine gas engine and propeller design. Good Salary. Address *The Engineering Agency, Inc.*, 1662 Monadnock Block, Chicago, Ill.

Wanted—One copy each of (International) MARINE ENGINEERING for the months of January 1918 to July 1918, inclusive. Address *Box 3*, care of MARINE ENGINEERING.

Wanted—A Marine Auxiliary Draftsman, capable of designing steering engines. Permanent position. Give age, experience, education and salary expected. *The Maine Electric Company*, 35 Commercial Street, Portland, Maine.

Marine Engineer—Wanted for an important and permanent position a high-grade marine engineer to take full charge of work. Excellent opportunity. Large Company. Location New York. Address *Box 28*, care of MARINE ENGINEERING.

Position Open—For Assistant Naval Architect with oil company. Requires practical experience, especially with tankship construction; also, good working knowledge of marine engineering. Address "*Tanker*" care of MARINE ENGINEERING.

Draftsman—Experienced in Marine Machinery drawing offices as designer and checker, and also in marine engine workshops, with steam and gas engineering education, will be free to take new place soon. Address *Box 4*, care of MARINE ENGINEERING.

Practical Marine Foreman and Engineer wishes connection with repair shop. Would act as foreman and invest $3,000 to $5,000. Locate anywhere. References. Address *Box 66*, care of MARINE ENGINEERING.

Marine Salesman desires representation with the manufacturer or distributor of engine and boiler room supplies or auxiliaries. Applicant is thoroughly conversant on above, having had seven years practical experience in the operation of reciprocating and turbine and reduction gear drives and fuel oil systems, holds unlimited tonnage ocean license. An opportunity to convince you will be appreciated. Address *Box 405*, care of MARINE ENGINEERING.

Wanted: First-Class Marine Engine Draftsman—For shipyard in the New York district, building nine thousand ton ships. Answer in full regarding age, experience and salary expected. Address *Marine Engine Draftsman*, care of MARINE ENGINEERING.

Wanted—Technical Graduate familiar with Marine Engineering specifications, first-class marine engine, electrical and pipe draftsmen. Permanent positions for right men in shipyard near New York City. Address *Graduate*, care of MARINE ENGINEERING.

Wanted—Drafting at home by expert. Tugs, lighters, schooners, yachts—steel, wood or concrete. Engine installation, alterations, repairs; yard layouts. Joiner details. Terms, $1.50 an hour. *E. Carroll*, 245-A Utica avenue, Brooklyn, N. Y.

Shipbuilder, with 18 years' experience in leading yards and New York harbor work, seeks responsible position as designer or naval architect, or would act as consulting engineer to parties contemplating extension of present fleet. Address *Designer*, care of MARINE ENGINEERING.

Mechanical Superintendent, with broad, practical shop and shipyard experience in building and installation work, wants position. At present have charge of installation and outfitting. Executive ability and thorough organizer. Address *Box 36*, care of MARINE ENGINEERING.

Wanted—Several experienced mechanical draftsmen; preferably men who have had thorough experience in the designing of marine Diesel or steam engines of large sizes. State age, experience and salary expected; permanent position. Address *Electric Boat Company*, Groton, Conn.

For Sale—One 13-inch General Electric type P. C. thirteen, twenty-ampere, one hundred fifteen-volt direct-current searchlight, complete with rheostat, overhauled and in A-1 condition. Three 67-foot and three 75-foot cargo booms in good condition. Address *Freeport Sulphur Company*, Freeport, Tex.

Purchasing Agent—A steel shipyard located in North Atlantic district has a vacancy for a thoroughly experienced and competent purchasing agent. None but experienced men who are capable of properly organizing and running a purchasing department will be considered. Applications, which will be treated in strict confidence, must give names of not less than three business references and names of firms in which recent experience has been gained and positions held, must state also age, whether married or single and salary expected. Address *Purchasing Agent*, care of MARINE ENGINEERING.

High-Class Engine Designer Wanted, also draftsmen, tracers and designers for structural and mechanical work on boats, derricks, etc. Good salaries and permanent position to the right men. Address *Chief Engineer, The Bravo Contracting Company*, Engineering Works Department, Pittsburgh, Pa.

Designing and Detail Draftsmen—For permanent positions with large manufacturing concern in New England. Men with electrical, steam engine, turbine or special machine experience. Apply, giving age, experience, education and salary expected by addressing *Chief Draftsman, Box No 90-X*, care of MARINE ENGINEERING.

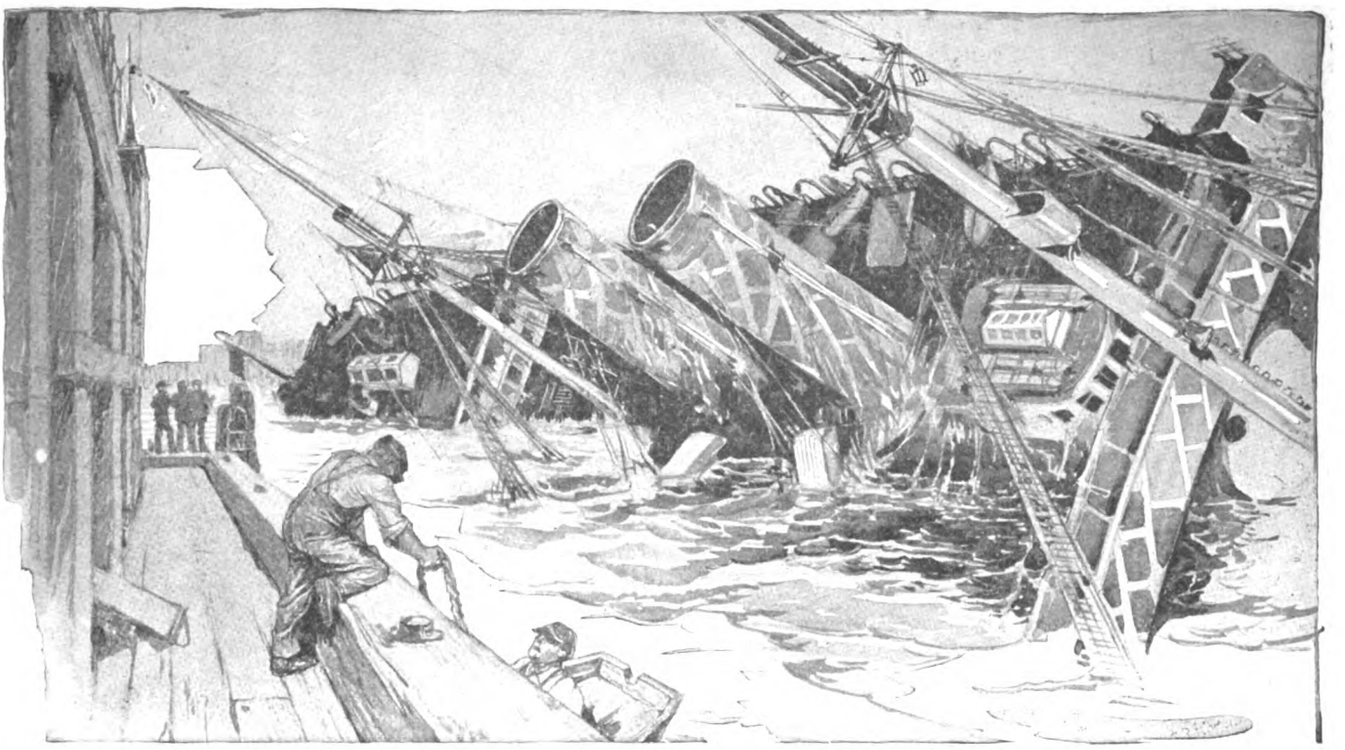
Oil Engine Drawings for sale in full sets of standard shop working drawings. For 5,000- and 9,000-ton steamers, four-cylinder, 24 by 36, 1,450 horse power, by 96 sheets, $1,200; for tugs four-cylinder, 18 by 27, $1,000, and four-cylinder, 16 by 24, $900. For yachts or as auxiliaries, steel column crosshead type, 10 by 12, $900; 6 by 8, $600; 4 by 5 trunk piston, $300. Address *Fuel Oil* care of MARINE ENGINEERING.

Ship Draftsman—Wanted to design and superintend the building of a small steel vessel, about 400 tons. Must have thorough knowledge of small ship designing and high class steel construction. Capable of specifying and obtaining bids, and inspecting work whilst in progress. Temporary help only: traveling expenses paid. Reply stating experience and salary required out of New York. Address *Shipowner*, care of Abbott, Masonic Buildings, Nassau, N. P. Bahamas.

A North Atlantic Shipyard building steel vessels has an opening for a technically trained and thoroughly experienced man to act as technical assistant to head executive. The man appointed must be capable of preparing estimates for new and repair work, write specifications, and look after claims against owners for extras and delay. Application, which will be treated with confidence must in first instance give full and detailed particulars of training and experience. Address *Box 749*, care of MARINE ENGINEERING.

"Penberthy Boiler Room Necessities" is the title of an 18-page booklet published by the Penberthy Injector Co., Detroit, Mich., among which are the following: "Penberthy automatic injectors, auto positive injectors, 'XL 96' ejectors, ejectors for all special requirements, regrinding valves, automatic and non-automatic cellar drainers, oil cups, grease cups, automatic and non-automatic water gages, plain engine lubricators, hand oil pumps, dripless air cocks, noiseless water heaters, etc."

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



When the St. Paul capsized— Her "85% Magnesia" Coverings Were Unharmed!

When the staunch American liner "St. Paul" sank in New York harbor just before she was to sail for France, it took four months to raise her and to pump the mud and water from her engine rooms and holds. Then it was discovered that the only equipment of her boilers and pipes that was wholly free from damage **was their heat-insulating coverings of "85% Magnesia".**

A quarter of a century of continuous, exacting service had not impaired in the least the heat-saving efficiency of these "85% Magnesia" coverings. **Nor had four months of continuous soaking at the bottom of the harbor impaired them in any way.**

No more strenuous test of the durability and unimpaired efficiency of any heat-insulation was ever made.

Those two outstanding properties of "85% Magnesia" — DURABILITY and EFFICIENCY—have made it the standard heat-insulation wherever the highest standards of service are required.

Where You Find It

The U. S. Navy has specified "85% Magnesia" for its Fleet since 1888, and the U. S. Shipping Board followed suit. The greatest steamships and strongest tugs are protected by it. Our powerful locomotives are "lagged" with it under their iron jackets—to hold their steam.

The largest power - plants and many thousands of factories use it to maintain their high-pressure.

For outdoor service in zero weather, in mines, in places where dampness, leakage, ice, and even occasional floods would ruin a poorer insulation, this "85% Magnesia" covering has never failed in maximum efficiency and durability.

For Heating, the biggest skyscrapers, hotels, public buildings use "85% Magnesia" to put the heat where it belongs and to save coal. In innumerable residences it insures even heat and cuts coal bills enormously.

For two years the Mellon Institute of Industrial Research of Pittsburgh University has been conducting experiments to prove the definite degree of its efficiency under varying conditions of temperature and pressure. A Table of the Monthly Coal Savings in Dollars and Cents has been prepared by this Institute, and the Magnesia Association will mail it to you for the asking. Also the illuminating book, "Let '85% Magnesia' Defend your Steam." If you are an engineer or architect, ask us for the Specification for the scientific application of "85% Magnesia" compiled and endorsed by the above Institute.

MAGNESIA ASSOCIATION of AMERICA

721 Bulletin Bldg. Philadelphia Penna.

EXECUTIVE COMMITTEE, Wm. A. Macan, *Chairman*

George D Crabbs, The Philip Carey Co. - Cincinnati, Ohio
Alvin M. Ehret, Ehret Magnesia Mfg. Co. Valley Forge, Penna.
J. R. Swift, - The Franklin Mfg. Co. - Franklin, Penna.
R. V. Mattison, Jr. Keasby & Mattison Co. Ambler, Penna.

Copyright, 1919, by M. A. of A. Permission to reprint by application

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRADE PUBLICATIONS

"Use of Acetylene in Navy Yards During the War" is the title of the leading article in the October issue of "Autogenous Welding", published monthly by the Davis-Bournonville Co., Jersey City, N. J. We quote in part as follows: "To show that acetylene played an important part in the Navy Yards in winning the war, the following monthly comsumption of acetylene at some of the Navy Yards are interesting; New York used 110,000 cubic feet per month; Charlestown 15,000 cubic feet; Norfolk 60,000 cubic feet; and Boston 75,000 cubic feet. While one is likely to think of the oxy-acetylene process as a means of welding, it happens that in the Navy Yards more acetylene is used in cutting probably than in welding. The war demanded of the Navy Yards, working in many cases ten or twelve hours a day, the reconstruction of hundreds of ships, changing from the pursuits of peace to the transport of troops and cargo carrying of war. Every time a passenger or cargo vessel is converted into a transport, many changes are necessary. Bulkheads must be cut out or moved, ventilation must be installed, plumbing, berthing and messing fixtures must be made and put in place. During the war, time was the primary consideration and money the secondary one. The oxy-acetylene torch cuts its way through all obstructions and provided a quick and easily transportable means of accomplishing the desired end. Ships were converted, refitted and quickly sent on their way, carrying the transports which at the vital moment perhaps turned the war. Not only were the ships already in existence made over, but new constructions in private yards, in new shipyards and in Navy Yards were rushed to the limit. Practically every plate and shape involved in ship construction, both merchant and man-of-war, requires cutting to a greater or less extent to insure fitting, to provide for passage of pipes, for access doors and hatches, etc. The portability of the gas cutting torch permits the tool to be taken to the work rather than taking the work to the tool. In the field of armor cutting—and there are thousands of tons of armor in modern ships—the gas torch of course holds entire sway. Hydrogen here assists acetylene in the heavier cuts."

The A. C. Starting Switch is the subject of a circular issued by The Electric Controller & Mfg. Co., Cleveland, Ohio. Some points of advantage claimed for this starting switch are: "Hot wire overloads. Same principle used in meters. Gives time element feature and absolutely acurate. Arranged for conduit connection for leads coming from supply lines. Contacts of the magnetic contactor type. Renewable copper tips. Arc is broken vertically. No laminations used in any part of the magnetic circuit. Provision made for padlock so that no one but the right man can touch the switch. Sliding contact operated by either of hot wire overloads. Quick make and break by means of springs and toggles. Conduit connection for push button supplied with each A. C. starting switch. Conduit connection for motor leads. Starting switch can be mounted near motor. Push button near operator. Terminal board for motor terminals. Flexible leads from this board to fingers. Copper fingers with renewable tips. Adjusting nuts to take care of wear of tips."

Flexible Shaft Bulletin No. 104 has recently been issued by the Stow Manufacturing Co., Inc., Binghamton, N. Y. Ball bearing flexible shafts are described as follows: "Certain flexible shaft applications demand unusual high speed; for this work, our ball bearing flexible shaft, the hand piece of which is considerably shorter than standard, and is equipped with Norma high speed bearings which guarantee accuracy and prevent heating, should be used in all cases where the speed is greater than 3400 revolutions per minute. Shafts are furnished in No. 3, 4, 5 and 6 regular, and No. 1 and 2 may be had special. This ball bearing equipment has been found to be advantageous for special applications."

This Welded 2 Inch Pipe Stopped a Flood-Driven Barge—

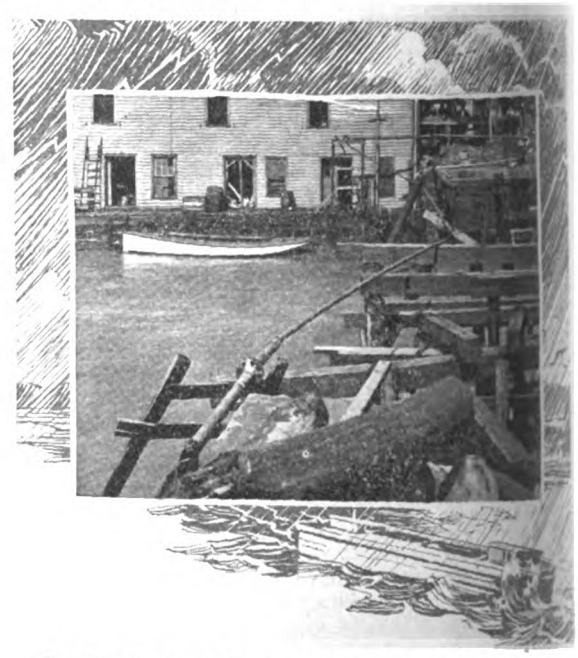
And Never Sprung a Leak!

To meet a temporary situation, the load from a 6" high pressure gas main was put through this welded 2" pipe line, laid on temporary piling across a river.

Floods came, washed away the false structure of a new bridge, tore a barge loose from its moorings and hurled the entire mass down on this slender 2" pipe.

It held them all. Not a single leak developed.

Wherever strength, permanence and tightness are essential, you will find joints are being *welded* — joined together "for keeps," using



Prest-O-Lite

DISSOLVED ACETYLENE

Nation-wide Prest-O-Lite Service brings straight to the user's hands a single cylinder of highest temperature gas—or hundreds of them.

Forty plants and warehouses insure Prest-O-Lite users prompt and adequate service; wherever located, there is an efficient Prest-O-Lite *producing* plant near.

THE PREST-O-LITE COMPANY, Inc.

General Offices, 30 East 42nd Street, New York

Kohl Building, San Francisco

In Canada: Prest-O-Lite Co. of Canada, Ltd. Toronto

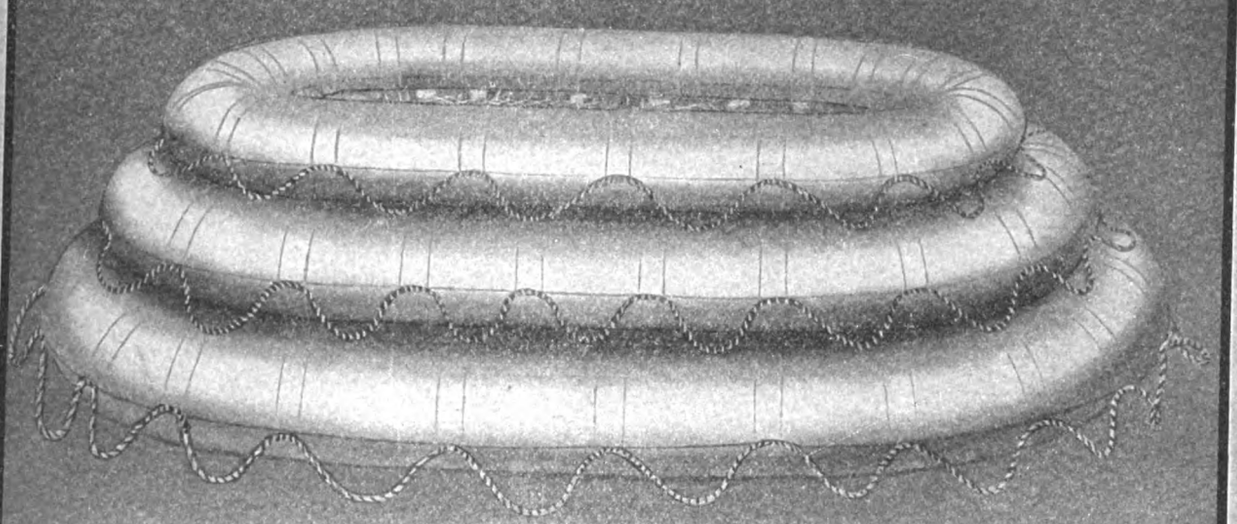
1219

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAFETY AT SEA

We do our bit in the manufacture of Marine Life-saving Appliances that will safeguard the lives of our officers, sailors, gunners and troops on ships going into the war zone



A nest of A. B. C. Life Rafts—Balsa Wood

For a great many years we have specialized in the manufacture of the highest grade of marine lifesaving equipment such as:

Lundin Decked Lifeboats
Lundin Motor Lifeboats
Welin Quadrant Davits
Norton Sheath Screw Davits
Standard Metallic Lifeboats with "Steel Keels"
Compensating Quadrant Cranes
Metallic Cylinder Life Rafts
Mills' Releasing Gear
A. B. C. Life Rafts
A. B. C. Life Preservers
A. B. C. Ring Buoys
Welin Gripe Release
Welin Non-Toppling Blocks

Our policy is: "The best is none too good"

Catalog on Request

AMERICAN BALSA COMPANY, Inc.

Welin Marine Dept. **50 E. 42nd Street, New York**

London House: 5 Lloyds Avenue, London, E. C.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"The Electric Ship" is the title of an illustrated booklet recently issued by the General Electric Co., Schenectady, N. Y. A complete description of the electrically propelled battleship *New Mexico* is the chief article contained in this booklet. The preface is as follows: "Electricity, at first merely an illuminant, has now captured the kingdoms of manufacture, transportation, and communication. It turns the wheels of industry, moves passengers and freight, and establishes direct communication between all parts of the world. Even the automobile and aeroplane—most recent achievements of modern ingenuity—depend upon the electric spark. And the wireless telegraph and telephone, which have bridged the seas for man's safety and convenience, are inherently electrical inventions. Electric drive for large battleships has only recently become a mechanical expedient, although electricity has for some time provided the same necessities and conveniences to those who live on water,—labor saving devices and even luxuries—that are available to the electric user on land. Like a great city the *New Mexico* has electric power and lighting plants, electric hoists, electric ventilation, electrified machine shop, carpenter shop, laundry, restaurant, and even a printing establishment. The electric motor does much of the heavy work for the sailor boys; it raises the anchor, moves heavy burdens and makes life comfortable. What is more logical than the application of electricity to the propulsion of ships, since it has already been extensively used for their lighting, for hoisting, ventilating, signaling, and cooking. Ships as they plow through the ocean waves are literally moving in an atmosphere of 'electrical waves!' What a contrast between the new and old! Modern days with our electrically equiped *New Mexico*, and the days of Ben Hur who, as a galley slave, toiled through the tasks now performed so easily by electricity. Thus has electricity, through man's ingenuity, conquered nature and advanced civilization at sea as well as on land."

"Putting Mettle into Metal" is the title of a handsomely illustrated booklet recently published by the Clark Equipment Co., Buchanan, Mich., This booklet, describing in detail the company's plant and the policies upon which Celfor tools are manufactured, states: "Mettle is quality—highest quality. It is spirit—conquering spirit. It is life—tenacious life. It is temperament—a distinctive vital force. It despises crass. It hates inferiority. It disdains the mediocre. It will have naught to do with common things. It glories in the highest and best. It is that intangible yet potent thing which laying hands upon the best of men touches their hearts as with a spark and enthuses them with the will to be and to do. It is the 'nerve' on which the spent runner wins the race. It is the dynamic of the thoroughbred. It is the source of hidden strength tapped by the gallant steed as he noses out a rival in the crucial moment of the handicap. It is toughness, stamina, endurance, vitality, bred-in-the-bone grit; it is all this and more. It is the inherent life and spirit of Celfor drills—the masterful quality built into them by earnest eager men whose product is their pride—the replica of the spirits of good men and true, wrought in the best of steel."

Portable Outfits for Oxy-Acetylene Welding and Cutting are described in a circular recently published by the Davis-Bournonville Co., Jersey City, N. J., "Convenience and safety of portable welding and cutting outfits demand special trucks and holding fixtures. The Davis-Bournonville cabinet truck provides permanent mountings for the regulators, and gages within a steel locker which also affords space for the torches, hose, accessories and supplies. The large wheel open truck carries the gas cylinders upright, securely chained in place. This outfit is not as complete as the cabinet truck. It is especially fitted for outdoor work as the 31-inch wheels traverse rough ground easily and the truck is not readily upset. The small wheel open truck, of the same general design as the large wheel open truck, is designed more especially for indoor welding and cutting and for use in general on floors, pavements and firm level ground. All Davis-Bournonville trucks are built entirely of iron and steel and are ruggedly constructed throughout."

IRON STEEL METALS

ARTHUR C. HARVEY CO.

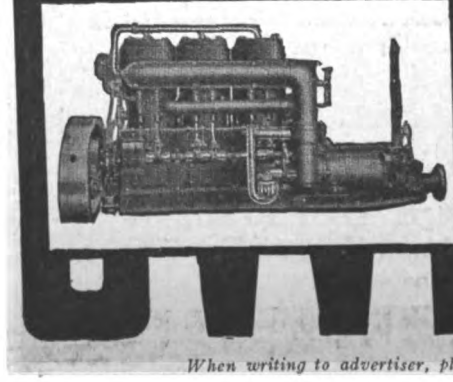
374 Congress Street Boston, Mass.

Tel., Main 7000

BOILER TUBES, RIVETS, PLATES, TANK STEEL, FLOOR PLATES, BARS, SHEETS, STRUCTURAL SHAPES, COLD ROLLED SHAFTING.

WE ARE EQUIPPED TO CUT TO SIZE ANYTHING CARRIED IN STOCK.

POWER



WOLVERINE

"The Motor With the Bore & Stroke"

PLUS FUEL COST REDUCED

From 70 to 80 per cent without sacrificing reliability, flexibility or control. Perfect combustion on kerosene or lowest grade of Coast Distillate.

5 to 200 H. P. — 1 to 6 Cylinders

Ask for Catalog 73.

WOLVERINE MOTOR WORKS, Bridgeport, Conn.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SEVENTH EDITION

PRACTICAL MARINE ENGINEERING

REVISED AND ENLARGED

By Rear Admiral C. W. Dyson, U. S. N.

This book is devoted exclusively to the practical side of marine engineering and is especially intended for engineers and students and for those who are preparing for examinations for marine engineers' licenses for all grades. It gives complete details regarding marine engines and all that pertains to them, together with much information regarding auxiliary machinery. It covers the general subject of calculations for marine engineers and furnishes assistance in mathematics to those who may require such aid.

Boilers, reciprocating engines, steam turbines and reduction gears (mechanical, hydraulic and electric), are treated exhaustively. A separate chapter deals with internal combustion engines (Diesel and heavy oil) and producer gas plants. Oil fuel burning and the latest practice in superheated steam are taken up in detail.

The chapter hearings include the following:

MATERIALS
- Fuels (coal and oil)
- Boilers (Fire tube and water tube)

Oil Fuel Burning
- Marine Engines
- Reciprocating Engines
- Steam Turbines
- Internal Combustion Engines
  - Gasoline
  - Heavy oil (Diesel)
  - Producer Gas

AUXILIARIES
- Pumps
- Condensers
- Feed Heaters
- Filters
- Evaporators
- Lubricating Devices
- Separators
- Blowers
- Pneumercators
- Time Firing Regulators
- Steam Traps
- Ash Ejectors, etc.

- Valves and Valve Gears
- Refrigeration
- Electricity
- Propulsion and Powering
- Operation, Management and Repairs
- Boilers, Engines, Turbines and Auxiliaries.
- Indicators and Torsion Meters
- Special Topics and Problems
- Computations for Engineers

The sixth edition has been enlarged by the addition of a chapter on miscellaneous machinery covering steering engines, capstans, windlasses, boat cranes, anchor engines, ash hoisting engines, towing engines, ventilating, heating and cooling apparatus, sirens and whistles, fire extinguishing and fumigating apparatus, reducing valves and regulating valves. The book now covers the latest practice in both propelling machinery with their auxiliaries and the deck machinery used in the handling of a vessel and her cargo.

MISCELLANEOUS MACHINERY

- Steering Engines
- Capstans
- Windlasses
- Boat Cranes
- Anchor Engines
- Ash Hoisting Engines
- Towing Engines
- Ventilating, Heating and Cooling Apparatus
- Sirens and Whistles
- Fire Extinguishing and Fumigating Apparatus
- Reducing Valves
- Regulating Valves

1067 pages. The book is illustrated with 550 diagrams and cuts, showing the most approved practice in the different branches of the subject. The text is in such plain, simple language that any man with an ordinary education can easily understand it.

PRICE $6.00

FOR SALE BY

MARINE ENGINEERING, 6 EAST 39th STREET NEW YORK CITY

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The William E. Williams Company, New York, maker of marine equipment, has recently published a 445-page illustrated catalogue of its products. This book is valuable in that it practically amounts to a handbook of ships' stores, equipment and shipbuilders' material. No attempt has been made in compiling the book to include all the products carrying the "WEW" mark but needless to say it is sufficient to supply information on practically any equipment that might be needed by ships, shipbuilders, stevedores, dock builders, factories, mills, etc. Bronze valves of all types for use under pressure from 200 pounds to 350 pounds per square inch and iron body valves for 150 pounds and less are specified in detail. These valves are regrinding and supplied in screw and flange ends. Globe, angle and cross valves are also described in detail. One particularly interesting description of the low presure mechanical system for burning fuel oil is given on page 64 of the book which, in describing the "White" system states that it is the growth of numerous experiments to attain perfection in the burning of liquid fuel under boilers by means of mechanical atomization in conjunction with the positive supply of an amount of pre-heated air adequate for complete combustion. Complete combustion is the key to efficient oil firing. It is secured by a process called atomization: the breaking up of the oil into an impalpable mist of finely divided particles which when brought into contact with the proper amount of oxygen will unite with it to form carbon dioxide (Co_2), creating an intensely hot flame without soot or ash. In the "White" system this atomization is secured by forcing heated oil under moderate pressure through a specially designed burner which, by its mechanical construction alone, so pulverizes the oil that it issues from the burner-tip in the form of a hollow cone-shaped mist completely surrounded by air both thus dispensing with any wasteful outside atomizing agency such as a jet of steam or compressed air. With the oil in this condition it is only necessary to bring into intimate contact with it the proper amount of oxygen of the air in order to secure complete combustion. It is of vital importance, however, that the contact be so intimate as to secure a perfect admixture of oil and air and also that the supply be uniform, continuous and under positive control. Excess of air beyond that required for efficient combustion spells waste of heat. Surface condensers of cast iron, having tube heads of Munz metal and tubes of seamless drawn brass or Admiralty metal are included in the section dealing with marine and industrial pumps of various types. Ship chandlery and equipment are given with such descriptions of special devices as demand individual treatment. Under this head may be included the Tanner sounding machine which is "noted for its simplicity of construction and operation." The moving parts are permanently attached in their respective places and are practically non-corrosive. The friction brake is in full view and is operated by simply moving its handle to right or left, thus playing out the wire or checking it as desired. The dial shows approximately the amount of wire out, the exact number of fathoms being taken from the correction table at the top of the machine. The patent elastic chain stopper and surge reliever was constructed "to prevent parting of chains while riding at anchor in dangerous positions, and also to prevent the loss of life and property." But when it was put to use the discovery was made that vessels rode much easier, and anchors held on much longer than they had done before with the old method of riding by the windlass. No matter how sudden or powerful, the shock, it is reduced to a steady strain by the elasticity of this stopper, thus easing the vessel and the chain and anchor all at the same time. No chain can be parted when used with this stopper unless the chain is subjected to a greater strain than the Admiralty test. It possesses great advantages when getting under way in a harbor filled with vessels, as also in any narrow place where it may be necessary to suddenly drop an anchor. An anchor can be held by this stopper at any point when heaving in; also a chain can be over hauled and an anchor dropped as readily from this stopper as from the cathead, thus saving the time and trouble required to cathead an anchor. With it a second anchor is always ready to be let go, thus often avoiding a collision. It is very useful in fleeting the chain

REG'D TRADE MARK

INTERNATIONAL
COMPOSITIONS FOR IRON AND STEEL VESSELS' BOTTOMS
In use and in stock at all ports of the world. Over 18,000,000 gross tons of shipping coated annually
Proprietors of INTERNATIONAL COMPOSITION, ANTICORROSIVE, and ANTIFOULING
INTERNATIONAL COMPOSITIONS CO. Offices, Welles Bldg., 18 Broadway, N. Y.

VALK & MURDOCH COMPANY
CHARLESTON, S. C.
Builders of Marine Boilers, Scows and Lighters

8,000-Ton Floating Drydock	1,500-Ton Marine Ry.	500-Ton Marine Ry.
Length on Blocks 440′	Length on Blocks 220′	Length on Blocks 100′
Depth over sill 22′	Depth over Blocks 14′	Depth over Blocks 7′

Marine Repairs a Specialty

STRATFORD SPECIAL NO. 1 MARINE OAKUM
receives the highest classification of the American Bureau of Shipping and Lloyd's Register of Shipping. It meets the requirements of all of the United States Government specifications. For years we have guaranteed the quality of each bale to be standard of excellence and returnable at our expense if otherwise. More of this grade Oakum has been used by the United States Government and its contractors than all other makes combined, yet, not a single bale has been condemned or rejected, whereas it has replaced the condemned Oakum of almost every other make. Our experience, quality and service are worth more to you than we ask.
GEORGE STRATFORD OAKUM COMPANY Jersey City, N. J.

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sun Marine Oils

HAVE PROVED THEIR WORTH

QUALITY SERVICE

SUN OILS

RELIABILITY EFFICIENCY

Good Ships deserve Good Oils

Let our engineers solve your engine room troubles

SUN COMPANY

1428 So. Penn Square - - - PHILADELPHIA, PA.

STOCKS CARRIED AT

New York City Boston Philadelphia Baltimore Pittsburgh Cincinnati Buffalo St. Louis
Chicago Minneapolis Toledo Newark Newport News Detroit Atlanta New Orleans Sabine

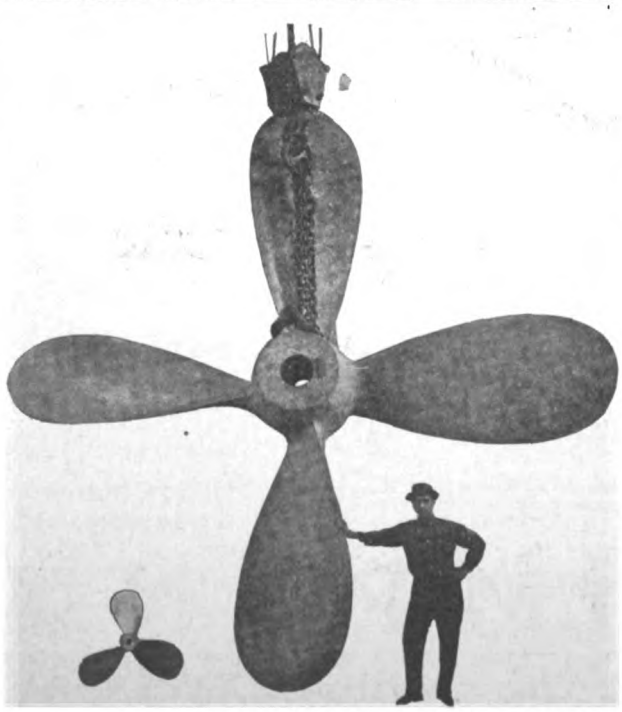
Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

when using a wooden windlass, as it does away with the apparatus called the devil's claw. When it is necessary to fleet the chain, all that is required is to slacken the chain and slide it down on the windlass—the stopper holding the anchor as soon as the chain is slackened—therefore, there is no chain lost that has once been hove in. Sections are devoted to complete stateroom and lubricating appliances and fittings, deck fittings, rigging, electrical equipment, ship instruments, taffrail logs, etc. Machine tools, carpenters' tools, screws, bolts, nuts, and hardware in general are listed. Among the engine room fittings described is the altitude gage which will indicate accurately at the boiler the height of water in the system and will be found very useful. When the water is at its proper level in the expansion tank, the ring and glass of the gage are removed, the stationary hand set at the pressure indicated by the work hand. When the pressure falls below this point water should be added. Pressure and vacuum gages are given for "all ranges of pressure and vacuum from full vacuum to 20,000 pounds per square inch, which are furnished for use on air, steam and liquids with charts graduated in many different units, such as pounds, ounces, inches and metric units." Steam traps, injectors and lubricators are also described in detail. For the boiler room the regular tool and pipe fitting equipmen are listed with a great variety of tube cleaners, scrappers and roller expanders. It would be impossible in the short space available to give a comprehensive idea of the vast variety of equipment and devices for marine and industrial uses dealt with in this catalogue, but it may be summed up in the word "complete."

"The Only Screw Holes in the World" are described in a folder issued by The Stine Screw Holes Company, Waterbury, Conn. Some of the advantages of screw holes are: "They can be used without damage to receiving material; they enable you to standardize to wood or machine screws in all material; they are made of brass and will not rust under atmospheric or moisture conditions; special tools are not needed in using them in any material; they can be used in any place a screw can be used; no special screws are needed—these screw holes fit any wood screw or machine screw now in stock; they make the neatest possible job in any material; they are endorsed by all dealers in screws and by all users of screws; in spite of the high cost of brass, screw holes are yet cheap; they make everlasting holes in any material; and anyone who can drive a nail can use screw holes."

The Milwaukee Crane is described and illustrated in a booklet isued by the Milwaukee Electric Crane & Mfg. Co., Inc., Milwaukee, Wis. We quote in part as follows: "The Milwaukee crane is the result of more than 25 years' experience in the designing and building of hoisting machinery for shops, foundries, steel plants and other establishments. Only those features which have proved desirable and essential on the score of safety, durability and convenience have been retained, and in addition thereto, self-oiling and other features which make for greater safety and durability, have been incorporated at an added expense in construction over the older practice simply because the extra cost is justified in the long run. Delays are expensive and usually due to neglect, intentional or otherwise, but in building the Milwaukee crane, the item of injury to the mechanism of the crane, due to neglect, has been reduced to a minimum. Every element in the design has stood the test of time and hard usage under all conditions of service."

"How Thermit Cured My Diseased Neck" is the title of a folder issued by the Metal & Thermit Corporation, 120 Broadway, New York. This folder illustrates a thermit welding repair, consisting of building up with thermit steel the worn rods on the end of the 16 inch diameter neck of a large roughing mill pinion used by the Universal Rolling Mill Co., Bridgeville, Pa. The company states, "It may be unprofessional for a physician to advertise, but that doesn't alter the fact that for surgery on roll necks, pinion teeth, crankshafts, shears, housings, or any other heavy steel sections thermit welding is the only reliable doctor."



WE HAVE MADE

PROPELLERS

FOR MANY OF THE

LEADING SHIPYARDS

WE ARE EQUIPPED TO HANDLE THE LARGEST PROPELLERS DESIRED, AND ALSO TO SUBMIT PRICES ON

PROPELLER PATTERN MACHINING DESIGNING

AMERICAN MANGANESE BRONZE CO.

HOLMESBURG, PHILA., PA.

(*MANUFACTURERS OF SPARE'S BRONZES*)

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

New Jersey Zinc Co.

The world's standard for Zinc products

DISTRIBUTION

Manufacturing products exactly adapted to the needs of those who require zinc in manufacturing is one thing—a vital thing.

Distributing those goods so that they are easily accessible and quickly obtained in the quantities desired is another thing —equally vital.

There is not one industry using zinc that we cannot serve with zinc products of the character desired or one that we cannot readily supply through our widely and conveniently located warehouses.

WAREHOUSES

BROOKLYN	Wallabout Basin Storage Co. 1208 Metz Street.
NEWARK	Newark Storage Co. Cor. Lawrence and Mechanic Sts.
PHILADELPHIA	Terminal Warehouse & Transfer Co. Delaware Ave., and Green St.
PITTSBURGH	Central Warehouse Co. Smithfield and Carson Sts.
CLEVELAND	Cleveland Storage Co. Scranton Road.
CHICAGO	Wakem & McLoughlin 140 South Dearborn Street
LOS ANGELES	Santa Fe Warehouse 300 Avery Street
SAN FRANCISCO	The Haslott Warehouse Co. 228 Pine Street

THE NEW JERSEY ZINC COMPANY, *160 Front Street,* New York
ESTABLISHED 1848

CHICAGO: Mineral Point Zinc Company, 1111 Marquett Building.
PITTSBURGH: The New Jersey Zinc Co. (of Pa.) 1439 Oliver Building.

Manufacturers of Zinc Oxide, Slab Zinc (Spelter), Spiegeleisen, Lithopone, Sulphuric Acid, Rolled Zinc Strips and Plates, Zinc Dust, Salt Cake and Zinc Chloride.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"A New Development in Boiler Feed Pumps" is the subject of a booklet recently issued by the Coppus Engineering & Equipment Co., Worcester, Mass. The booklet states, "Up to now the enormous demand for small boiler feed pumps has been met almost entirely by reciprocating pumps, although the advantages of centrifugal boiler feed pumps have become so generally recognized that they are almost exclusively used at present for large capacities. Centrifugal pumps are either electro motor or steam turbine driven. In either construction the motor or turbine respectively, and the pump, are separate units connected by a flexible coupling and mounted on a cast iron base plate. Motor driven centrifugal boiler feed pumps are seldom constructed for small capacities, for the reason that the pressure head of a single impeller is small on account of the comparatively low speed of the motor, necessitating a large number of stages. This not only is costly in construction, but also in maintenance, and therefore unpractical. Steam turbine driven centrifugal pumps are also seldom constructed for small capacities because a good steam turbine, built as a unit it itself, and mounted on a base plate, is too expensive to connect to a small centrifugal pump, making competition with the duplex or simple steam pumps impossible. Yet an efficient turbine driven centrifugal boiler feed pump for small capacities has so many advantages over the reciprocating steam pump that its need has been keenly felt for a long time. Such a pump, therefore, is bound to receive a welcome reception by the owners or operators of small power plants. With the requirements of such a pump clearly in view, it has been our aim to produce a pump of the most simple design with a comparatively high efficiency, a machine that is built in very compact form to withstand severe usage, to occupy very little floor space, to operate smoothly and continuously without interruption. After years of study and experimentation we have developed the Coppus Type CCC centrifugal turbo boiler feed pump. It contains the best elements used in modern turbine and pump practice, ingeniously combined to make up a simple and dependable boiler feed pump."

"Boiler Logic" is the title of a booklet issued by the Heine Safety Boiler Co., St. Louis, Mo. "While it would be to the advantage of the manufacturer to produce and market a single universal design of boiler, such standardization cannot be attained; the modern boiler must be adaptable in design and setting to the multiplicity of requirements of fuels, furnaces and operating conditions. A single rigid construction is not suited to all plant conditions. Flexibility of design is essential and the arrangement in any case for hand firing, stoker firing, fuel oil, waste heat, etc., depends on certain fundamentals of combustion and heat transfer which will be briefly considered. In combustion, heat is generated from the latent energy of fuel, and since the boiler design and setting influence in some degree the efficiency of this process, we will consider briefly the essentials of furnace design. The heat liberated by combustion is almost all available for generation of steam, and, therefore, efficient boiler design from the standpoint of heat absorption, is the next essential." The principles of boiler practice are dealt with at length in this booklet as well as the various types and sizes of Heine Boilers that may be adapted to special power plant needs.

Ingersoll-Rand Air Lift Pumping is the subject of a circular published by the Ingersoll-Rand Co., 11 Broadway, New York. If interested in this air lift pumping, ask for catalogue No. 76. This company states: "The engineer of a Georgia water works writes that his Ingersoll-Rand air lift has been shut down but once in 11½ years, while a new deep well pump installed in another (shallow) well has had to be pulled for repair 15 times in 13 months. For reliable pumping service there is nothing like the air lift and an Ingersoll-Rand air compressor."

INSIST ON HAVING
JEFFERY'S MARINE GLUE
In all the various grades it is the best for the money—the most serviceable. Pound for pound it will go further and do a better and a more lasting job than any other make. Do not be deceived by cheap imitations; see that the trade mark is on every package.
Send for booklets: "MARINE GLUE—WHAT TO USE AND HOW TO USE IT" and "HOW TO MAKE YOUR BOAT LEAK PROOF"
L. W. FERDINAND & CO.
152 Kneeland St. Boston, Mass., U. S. A.

UNION DRY DOCK & REPAIR CO.
Vessel Repairs in Wood and Iron
WEEHAWKEN, N. J.
Dry Docks and Shipyard Adjoining West Shore Ferry
TELEPHONE, 904-905 UNION

We Sell all Books on Marine Engineering
Not Out of Print
MARINE ENGINEERING
NEW YORK: 6 East 39th Street

The Invincible Nozzle
Fire Department Supplies
ANDREW J. MORSE & SON
INCORPORATED
221 HIGH ST., BOSTON, MASS.
DIVING APPARATUS

FOR SALE

Triple Expansion Marine Engine 18" x 32" x 54"—42" stroke. Has been in service fifteen lake seasons in a wooden steamer of 3000 tons capacity. Has been thoroughly overhauled and is in A-1 condition. Shipping weight approximately 70 tons.

Windlass, 8 x 10 of Providence manufacture, suitable for 1¾" stud link chain. Arranged for capstan drive. In first class condition.

Both subject to inspection. Immediate delivery.

McDougall-Duluth Company
Duluth, Minn.

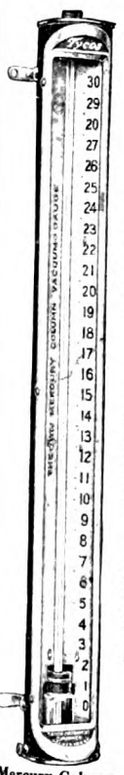
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Bench Legs, Work Stands, Vise Stands and Bench Drawers are among the many types of shop furniture described and illustrated in a catalogue published by the New Britain Machine Co., New Britain, Conn. A typical treatment of one product, bench drawers, will serve to indicate the method used in this catalogue to describe all the products manufactured. "With the passing of the old wooden drawer we must record its one virtue—it would not of itself damage edged or pointed tools thrown in carelessly. Among its recognized faults, on the other hand, were sticky action, incomplete exposure, liability to come off the slides and dump contents or to break down either slides or drawer when fully opened. Then, too, in the common type of bench now almost universally used, with thinner back plank than front one, there is an open space between the plank and the back of the drawer which invites pilfering. A bench drawer should thoroughly protect and display its contents and be of convenient dimensions for proper stowage. In the designing of what is thought to be a superior drawer for shop use, we have retained wood for the back, bottom, and front. Fine edged or precision tools can therefore be laid in same without injury. The drawer is long enough to hold, laid straight, the longest file or hammer that a machinist is liable to use, and broad enough to accommodate a considerable variety of tools without laying them one upon the other. The drawer is sold as a unit and is so applied, by anyone capable of inserting a few screws, without any cutting of the bench. There is no assembling to be done, no loss if it is ever desired to move drawer. When shut and locked it cannot be entered or removed without breaking. A smooth plate over the drawer opposes any tampering at the rear and prevents blocking or a lockout through wedging of contents. The drawer runs on anti-friction rolls on finished surfaces, giving that smooth movement which prevents shucking disturbance, while the familiar cramping and wedging of bureau-drawer action are entirely prevented by parallel motion mechanism consisting of cross shaft and pinions on racks. The racks are inverted, so that dirt will not clog nor wear the pinions. So easy does the drawer work, even when fully loaded, that it can be handled by one free hand, either from end or middle. It is impossible to make it bind. Cylinder lock of good grade with two individual keys is provided. Master keying, if desired, may be had at cost. The possession of master key by foreman will prevent any contraband being stowed in drawers."

Catalog M., recently issued by the Thacher Propeller & Foundry Corporation, Albany, N. Y., lists the following among the products manufactured: anchors, bitts, capstans, castings, cleats, chocks, deck irons, forgings grates, hawse blocks, propeller wheels, ventilators and heavy marine hardware. "It is our pleasure to submit in this catalog various articles of marine equipment of our own manufacture. Each article illustrated is manufactured complete from the raw material to the finished product, at our works, at Albany, New York. We aim to build the best that can be produced by combining long experience and careful study with selected material and the finest workmanship. In all cases we stand behind our product with a guarantee as to quality of material, workmanship, design and durability in operation."

Lubricating Oil Storage Systems are the subjects of bulletin No. 65, issued by the Wayne Oil Tank & Pump Co., Fort Wayne, Ind. "The battery method of handling, storing and distributing lubricating oils assures the user that the barrels will be entirely drained, that the liquid will be safely stored in practically fireproof containers, free from dust and dirt, and that every gallon can be accounted for. Tanks are made in capacities of two barrels and up in battery form and can be added to as needed, height and length from front to back of the entire battery remaining uniform and width across front varying acording to capacity, economizing floor space to the greatest possible degree."

Are the Instruments Aboard Your Ship Dependable?



Mercury Column Vacuum Gauge

Tycos INSTRUMENTS

never fail to record properly

Tycos Mercury Column Vacuum Gauge

An instrument harmonizing in its characteristics with the highest grade of engine room equipment. A credit to any gauge board. Length 37⅞", diameter 3½", center to center of bracket holes; vertical 30⅜", horizontal 4¾".

Tycos Shiphold Thermometer

Mounted in a clyndrical galvanized-iron case fitted with rubber buffers. Originally designed for use on board refrigerated ships, for lowering into hold thru a tube but can be used for other purposes, such as determining temperature of stored coal, etc.

Can also used as an inexpensive form of Brine Tank Thermometer, its rugged construction permitting of its being suspended in the brine. This thermometer is filled with red liquid and has magnified column.

Write for Prices

Taylor Instrument Companies
ROCHESTER, N. Y

There's a Tycos or Taylor Thermometer for Every Purpose

Shiphold Thermometer

SCALE—AND THE CURE

Boiler scale cannot be prevented from forming, but there is a way of removing it easily.
The answer is to use

Dixon's Pioneer BOILER GRAPHITE

It is introduced into the boiler feed water. The particles work their way through the minute fissures of the scale, lubricate the scale, so to speak, and greatly facilitate subsequent cleaning by ordinary methods. Once clean, scale cannot again burn fast to the metal.
Both time and labor costs are cut in half, and cleaner boilers are the result.
Graphite has not taste or odor, nor is it soluble. It does not prevent the use of live steam for cooking or washing. It does not destroy gaskets, valves and fittings on steam lines.

Write for Booklet No. 75-T and further information.
Made in JERSEY CITY, N. J., by the

JOSEPH DIXON CRUCIBLE CO.
ESTABLISHED 1827

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Fluid Meters for Low Pressure Gas and Air are described in bulletin No. 30, issued by the Bailey Meter Co., Cleveland, Ohio. The introduction reads as follows: "The Bailey Meter Company has developed a meter for the measurement of low pressure gas and air, the design being such as to give the same power and accuracy on two-inch water differential as our standard fluid meter gives on two pounds differential. The company has been manufacturing various types of meters since January, 1916, these meters having been developed and perfected during the past ten years. They are particulary adapted to the many and varied needs of modern power plants, gas works, steel mills, chemical works, and in fact all large producers or users of power. They have been developed as a result of a long and intimate knowledge of the actual operating conditions, needs and demands of this line of work, and have proven rugged and dependable, giving accurate results over long periods of continuous service. Above all they are designed to give reliable information and results in the forms that are most useful and comprehensive to the fireman, engineer, or other attendant in charge, as well as to the superintendent and those interested in efficiency and operating costs. Judging by the results obtained from the large numbers of meters that have been in continuous service for a number of years, we have no hesitation in stating that we have by far the most complete and the very best line of meters for measuring the flow of all fluids."

Electric Air Compressors, Portable Electric Drills, Electric Valve Grinders, is the title of a catalogue recently issued by the Black & Decker Manufacturing Company, Baltimore, Md. The object of this book is to bring out the three fundamental qualities, design, material and workmanship of mechanical devices produced in Black & Decker plants. "Long before the first Black & Decker Lectroflater Electric Air Compressors or Portable Electric Drills were placed on the market The Black & Decker Manufacturing Company designed and built special machinery, such as currency presses for the United States and Canadian Governments, postage stamp machines, duplicators, milk bottle cap machines, moving picture cameras and projectors, shoe machinery and special tooling for other manufacturers' production work. During the war they made, in addition to the regular line of Lectroflater Electric Air Compressors and Black & Decker Portable Electric Drills, such percision apparatus as gun sights for naval rifles, breech mechanisms for airplane cannon, demolition and incendiary bomb firing mechanisms, etc. It is obvious that sound engineering ability must be the basis of such work and one logically expects—and finds—the predominating feature of Black & Decker products to be their advanced design. The result of such experience has been the inculcation of an acute sense of material values, which insures the use of correct materials in all Black & Decker products. Work such as that mentioned requires the utmost exactness and has developed the ability of the organization to perform accurate work. Good workmanship has become a habit and is an outstanding characteristic. At the first opportunity examine a Black & Decker electric drill, valve grinder, or air compressor. You will appreciate the fine workmanship they evidence. We have no hesitation in ascribing a large portion of the mechanical perfection of our products to the unusually fine morale of our entire organization, due to what might a few years ago have been termed an idealistic policy, but which is now recognized as the fair and sound business policy of cooperation between management and the manufacturing organization. In other words every man is working with his hands and individual mind in cooperation with every other toward the common welfare, and is not merely a cog in a machine doing a daily stint without knowledge or interest in the finished product."

"Chelsea" Clocks are described in Catalogue F., recently published by the Chelsea Clock Co., 16 State St., Boston, Mass. This company makes a specialty of striking ship's bell clocks.

Williams' Superior Drop-forged Wrenches are described and illustrated in a catalogue recently issued by J. H. Williams & Co., 61 Richards St., Brooklyn, N. Y. Prices are also quoted for the various types of wrenches manufactured by this company. A copy will be sent to any reader upon request.

"Overcoming Difficulties Constitutes Progress" is the title of the leading article in the October issue of "Staybolts", a bi-monthly digest published by the Flannery Bolt Co., Vanadium Building, Pittsburgh, Pa. We quote in part as follows: "There is a reason why we are advocating so strongly the use of the F. B. C. type of flexible staybolt, and why we so persistently followed the idea of welding the sleeve to the outer boiler plate. We believe that it is the only means by which the sleeve connection to the outer plate can be made steam tight, and that it is more reliable and economic to maintain in service than the threaded sleeve connection heretofore used for the Tate flexible staybolt. Our belief is the result of many years' investigation and study of the present standard type of flexible staybolt in use, and a description of the experiences and difficulties met with in this investigation will convince mechanical officials of the railroads that the welded type of flexible staybolt is essential to remove defects that cannot be eliminated by the threaded type of flexible staybolt now in general use."

MARINE SOCIETIES

AMERICA

AMERICAN SOCIETY OF NAVAL ENGINEERS
Navy Department, Washington, D. C.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
29 West 39th Street, New York

NATIONAL ASSOCIATION OF ENGINE AND BOAT MANUFACTURERS
29 West 39th Street, New York City

UNITED STATES NAVAL INSTITUTE
Naval Academy, Annapolis, Md

NATIONAL ASSOCIATION OF MASTERS, MATES AND PILOTS
National President—John H. Pruett, 422 Forty-ninth St., Brooklyn, N. Y.
National Treasurer—A. B. Devlin, 187 Randolph Ave., Jersey City, N. J.
National Secretary—M. D. Tennisswood, 308 Vine St., Camden, N. J.

LIST OF OFFICERS, AMERICAN SOCIETY OF MARINE DRAFTSMEN
President—A. H. Haag, 127 Woodside Ave., Narberth, Pa.
Vice-President—C. E. Deiser, 6124 Nassau Road, Philadelphia, Pa.
Secretary—B. G. Barnes, 6 Meadow Way, Bath, Maine.
Treasurer—J. B. Sadler, P. O. Box 357, Norfolk, Va.
Executive Committeemen—G. W. Neebaum, Washington, D. C.; E. H. Monroe, Washington, D. C.; John Thomson, Bath, Maine.

NATIONAL MARINE ENGINEERS BENEFICIAL ASSOCIATION OFFICERS
National President—Wm. S. Brown, 228 Ellicott Square Bldg., Buffalo, N. Y.
National Secretary—Geo. A. Grubb, 228 Ellicott Square Bldg., Buffalo, N. Y.
National Treasurer—Albert L. Jones, 79 Avery Avenue, Detroit, Mich.

CANADA

GRAND COUNCIL, N. A. OF M. E. OF CANADA
Grand President—A. R. Milne, Kingston, Ont.
Grand Vice-President—E. J. Belanger, Bienville, Levis.
Grand Secretary-Treasurer—Neil J. Morrison, P. O. Box 886, St. John, N. B.
Grand Conductor—J. W. McLeod, Owen Sound, Ont.

GREAT BRITAIN

INSTITUTION OF NAVAL ARCHITECTS
5 Adelphi Terrace, London, W. C.

INSTITUTION OF ENGINEERS AND SHIPBUILDERS IN SCOTLAND
39 Elmbank Crescent, Glasgow

NORTHEAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS
Bolbec Hall, Westgate Road, Newcastle-on-Tyne.

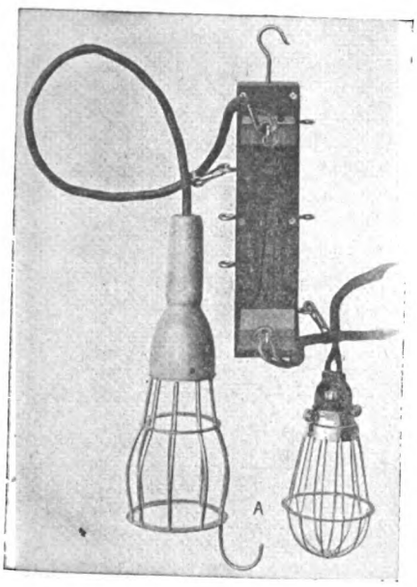
INSTITUTE OF MARINE ENGINEERS INCORPORATED
The Minories, Tower Hill, London

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Our Activities are Four-Fold" is the statement made in a booklet recently issued by the Vibration Specialty Co., 239 N. Watts St., Philadelphia, Pa. We quote in part as follows: "We manufacture balancing apparatus, (latest Akimoff designs), and all sorts of special machinery for the study and elimination of vibrations. We do practical balancing, both in our laboratory and in the field; all weights and sizes. We design high-speed parts, such as crankshafts of gas engines; and special rotors of all kinds. We do research work along all lines of mechanical engineering. We are affiliated with two other laboratories and have facilities for working out all difficult problems of engineering practice. We are absolutely independent and have never been connected with any other concern. We have been very successful, made numerous friends, whom we certainly intend to keep, and all our goods and results are absolutely guaranteed in every respect. We do not guarantee the performance of any other apparatus, or the correctness of anyone else's statements in regard to balance or its problems. We always have our apparatus approved by the United States Navy Department, and exceedingly regret that their rules prohibit us from quoting the reports of their experts. We have done work balancing for the U. S. Navy from the first day we started."

"The Big Jobs Come to Todd" is the statement made in a handsomely illustrated booklet recently published by the Todd Shipyards & Dry Dock Corporation, 15 Whitehall St., New York. A brief description of the repairing of the S. S. *Lord Dufferin*, at the plant of Robins Dry Dock & Repair Co., is given as follows: "The renewal of the after section of the British freighter *Lord Dufferin* attracted so much attention that we kept, as far as weather conditions would permit, a photographic record of the progress made while the vessel was in the yards of the Robins Dry Dock and Repair Company, our Erie Basin, Brooklyn, plant. The razor-like stem of the *Aquitania* had cut the freighter completely in two at a point about twelve feet forward of the poop deck and just aft of cargo hatch No. 5. The section to be restored measured sixty-four feet and a small scale outline, a deck plan and a photograph were the only guides available. The job was completed in the record time of eighteen and one-half working days and when the *Lord Dufferin* left the dock the new section had been so skillfully built on that the water lines and sheer lines vanished into the orginal portion of the hull so perfectly that it was impossible to detect that twenty percent of the hull had been rebuilt. Following the collision the freighter was raised and, aided by pontoons, towed to the Erie Basin yards and placed in the graving dock. The after portion of the vessel, including rudder, stern frame, propeller, tail shaft, stern tube, two lengths of intermediate shaft and machinery and fittings in the section, was lost. Three molds were taken of the sound portion of the hull at equal distances just forward of the cut. Lines were then run for the new stern and faired up to the satisfaction of owner and surveyors. Molds were made of all frames, beams, floors, keelsons, stringers, tanks, tunnel recess, bulkheads and deck-plating. The entire stern overhang, from and including the transom frame aft, was fabricated, assembled and riveted together on shore and after being hoisted in place was secured on stays. While this work of reconstruction was under way the propeller, tail-shaft, stern tube, intermediate shafts, bearings, hand steering gear, rudder, fittings, winches and accommodations were rushed to completion so that there would be no delay in their installation as soon as the work on the hull had advanced far enough to receive them. Following the erection of frames, floors, beams and stringers templates were made of the shell plating, the material fabricated, hung on the ship and riveted."

"LITEHOLD" Portable Strip and Plugs



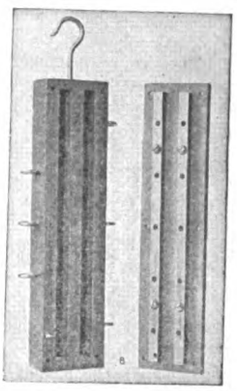
For temporarily lighting Hulls of Ships under construction

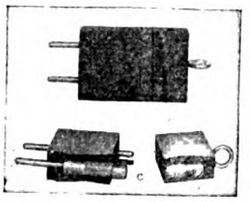
Illustration A.—Strip and 2 Plugs showing different type guards.

"B" carbolineum treated maple base with fibre top and brass connections for 5 plugs, Base 10½ in long, 2½ in. wide 1 13/16 in. thick.

"C" hard rubber plug, 1-in. thick 2-in. wide, 3⅛-in. long, with brass prong contacts and midget enclosed fuse. Fuses 2 to 15 amp. as desired. Note supporting hook, also snap hook strain relief for plugs.

OKONITE hard service cord recommended for use with above.





NOVELTY ELECTRIC COMPANY

Manufacturers and Distributors Electrical Supplies
50-52-54 North Fourth Street, Philadelphia
Agents for
Okonite—Wireless Cables—Tapes Holtzer-Cabot—Motors—Generators, Etc.

Generated on 2024-09-12 08:22 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HELP AND SITUATION AND FOR SALE

☞ *No advertisement accepted unless cash accompanies the order.*

Advertisements will be inserted under this heading at the rate of 4 cents per word for the first insertion. For each subsequent consecutive insertion the charge will be 1 cent per word. But no advertisement will be inserted for less than 75 cents. Replies can be sent to our care if desired and they will be forwarded without additional charge.

Wanted—Steel Tug, 100 to 115 feet long, 500 to 700 H. P. New boat preferred. Address, giving full particulars, P. O. *Box 477*. Charleston, S. C.

College Graduate, scientific course, first class traded machinist experienced in marine engine construction, coal and oil firing, splendid health and physique, executive experience; success with labor; 34 years of age, married. Permanent connection desired, $55 week. Address *Box* 209, care of MARINE ENGINEERING.

Wanted—A High Grade Superintendent for structural and plate shop, capacity one thousand tons per month. No one need apply who is not a first class, well educated, thoroughly experienced man, with good references. Apply *Box 807*, care of MARINE ENGINEERING.

Marine Engineer—Wanted for an important and permanent position a high-grade marine engineer to take full charge of work. Excellent opportunity. Large Company. Location New York. Address *Box* 28, care of MARINE ENGINEERING.

Wanted—A Marine Auxiliary Draftsman, capable of designing steering engines. Permanent position. Give age, experience, education and salary expected. *The Main Electric Company*, 35 Commercial Street, Portland, Maine.

Wanted—Technical Graduate familiar with Marine Engineering specifications, first-class marine engine, electrical and pipe draftsmen. Permanent positions for right men in shipyard near New York City. Address *Graduate*, care of MARINE ENGINEERING.

For Sale—One 13-inch General Electric type P. C. thirteen, twenty-ampere, one hundred fifteen-volt direct-current searchlight, complete with rheostat, overhauled and in A-1 condition. Three 67-foot and three 75-foot cargo booms in good condition. Address *Freeport Sulphur Company*, Freeport, Tex.

Oil Engine Drawings for sale in full sets of standard shop working drawings. For 5,000- and 9,000-ton steamers, four-cylinder, 24 by 36, 1,450 horse-power, by 96 sheets, $1,200; for tugs, four-cylinder, 18 by 27, $1,000, and four-cylinder, 16 by 24, $900. For yachts or as auxiliaries, steel column crosshead type, 10 by 12, $900; 6 by 8, $600; 4 by 5 trunk piston, $300. Address *Fuel Oil*, care of MARINE ENGINEERING.

Basic Patent Rights on Rotary Engine for sale. The Rotary is the ideal engine for driving pumps, blowers, generators, etc. Address *Rotary Engine*, care of MARINE ENGINEERING.

Scientific Scale Removal is the name of a booklet published by the Lagonda Manufacturing Company, Springfield, Ohio. "Wherever modern steam turbines, engines, generators, etc., are used it is generally admitted that the practical limit in efficiency has been reached and that at best a further increase of only two or three percent can be expected. At the same time it is equally well known that an efficiency of seventy percent in the boiler room is exceptional, and that as a general rule the boiler only gets from thirty to fifty percent of the total available heat-energy of the coal into the steam. It is therefore evident that in most power plants an increase in efficiency of from thirty to fifty percent is possible in the boiler room; and this accounts for the unusual amount of attention that at the present time is being given to the economical operation of the boiler plant. We were one of the first firms to appreciate that scale removal by means of mechanical cleaners was the most thorough and statisfactory, and over twenty years ago we built our first tube cleaner. Since that time the improvements in cleaners which we have devised have been many. The result is that at the present time we have over seventy different cleaners from which an engineer may select the one best suited to his requirements. We do not believe that any one type of cleaner can be used in all places, and inasmuch as we manufacture such a variety of types, our advice as to the best design for a given case is unbiased. For badly scaled tubes, or for plants where scale conditions are very severe, or where scale has to be removed quickly, there is no method that can compare with the use of our mechanical cleaner, because it is driven from the outside the boiler and there is absolutely no limit to the amount of power that can be applied to the head. In fact, one of these cleaners when belted to a steam engine or electric motor, or direct connected to one of our external motors, can develop enough power to bore its way through a stone wall. The mechanical cleaner greatly reduces the time that a boiler is out of commission and on an average a mechanical cleaner will clean a boiler in one-third the time that would be taken by an ordinary turbine cleaner, and it will easily remove scale from tubes that a turbine would not touch. In addition to this, there is a considerable saving in the water used and the cost of pumping it."

Nickel and its Products is the title of a booklet issued by the International Nickel Company, New York. "The purpose of this booklet is to convey to buyers, in a concise manner, a description of our Nickel Products. it is intended to serve as a guide when forwarding inquiries or when soliciting information pertaining to Nickel." A general history of the Nickel industry on this continent is also given from the year 1866 when John Wharton first produced commercial metal from the ores of his mine at Lancaster Gap, Pa., down to the year 1902 when the company formed under his control, as well as several others, became consolidated under the name of the International Nickel Company. The catalogue treats of the production and uses of nickel in metallic form, as an oxide and in the form of salts by this company from that time to the present.

The Hercules Line is a catalogue produced by the Hercules Machine Company, Inc., New York, which describes the machinery necessary to the economical manufacture of lumber, building material, furniture, etc. "Economy has been made possible by recent improvements in woodworking machinery. In the past ten years a very large number of new machines, designed to save labor and produce more and better work, have been introduced. So many have been these improvements that the perfectly equipped modern mill or shop bears little resemblance to one of the older type. While conservatism in regard to the adoption of new machines is always desirable, the shop or mill manager should make a careful study from time to time of new improvements and inventions relating to the Woodworking Industry. Otherwise his plant cannot be maintained in an up-to-date condition, so as to be capable of turning out the maximum quantity of finished product. In this catalogue we illustrate our latest improved types of woodworking machinery. These machines embody many improvements over the early patterns, which have been suggested by actual experience in their use under all conditions. The engravings give an idea as to the many improvements in our machines, strength of their construction, and their complete adaptability to all purposes for which they are designed. We extend to all users of woodworking machinery a very cordial invitation to visit our factories for the purpose of inspecting our machines while in the course of construction."

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

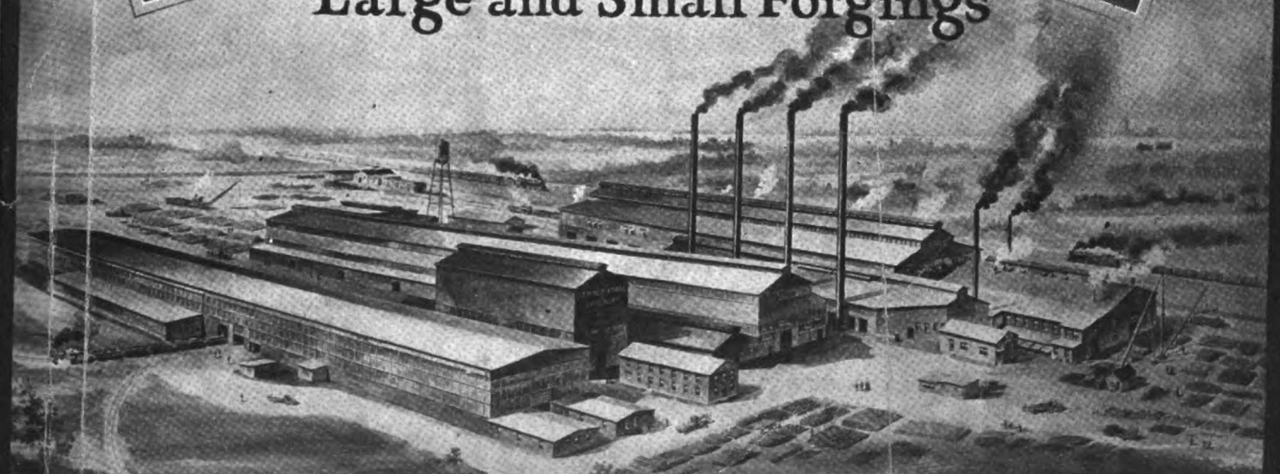
INTERNATIONAL

MARINE ENGINEERING

Main Office: NEW YORK 6 East 39th Street SUBSCRIPTION PRICE: Domestic, $2.00: Foreign, $3.00 LONDON OFFICE: 8 Bouverie St. E. C.

CAMDEN FORGE CO.

Manufacturers of
Large and Small Forgings

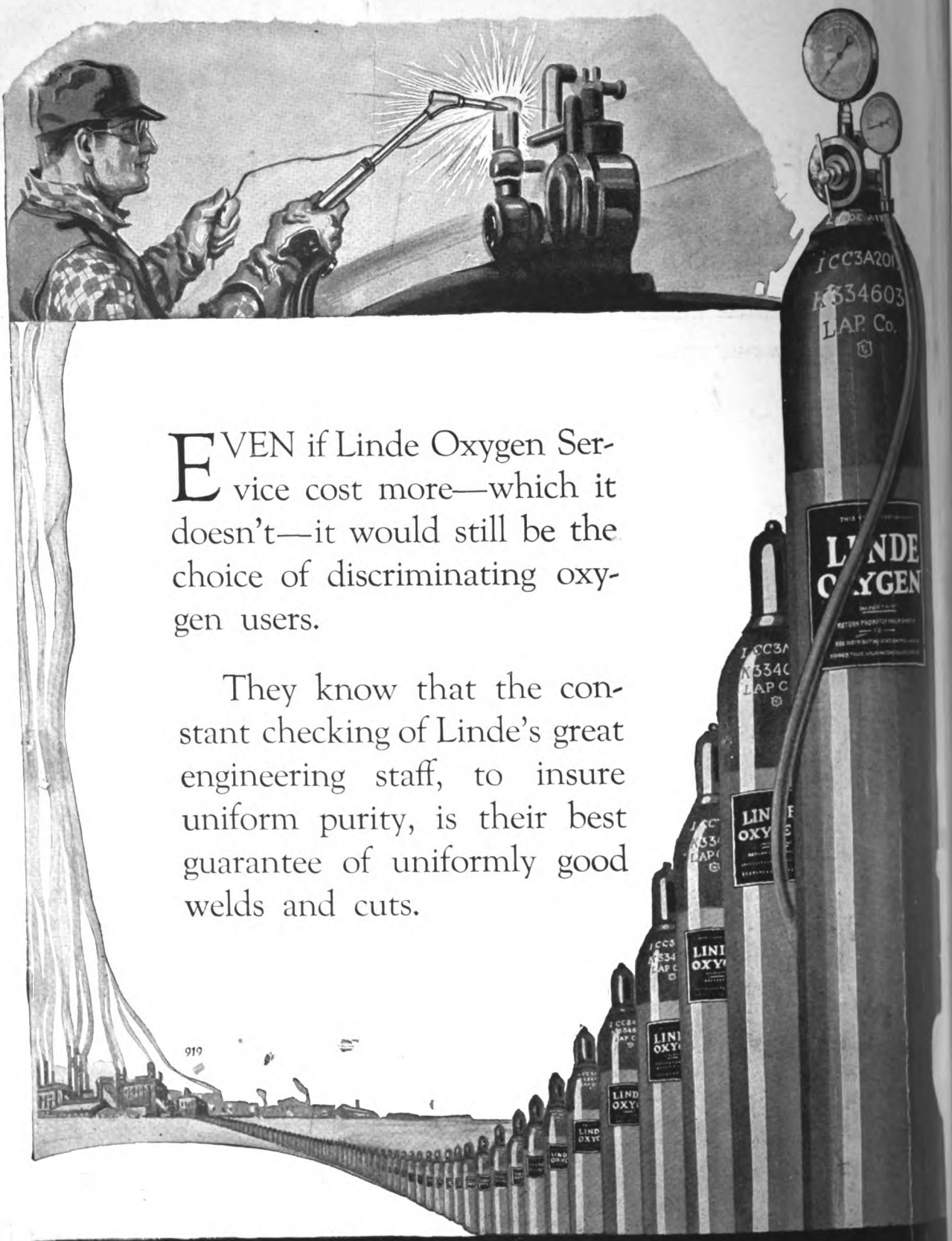


CAMDEN, N.J., U.S.A.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN



EVEN if Linde Oxygen Service cost more—which it doesn't—it would still be the choice of discriminating oxygen users.

They know that the constant checking of Linde's great engineering staff, to insure uniform purity, is their best guarantee of uniformly good welds and cuts.

The Linde Air Products Company

Largest Producer of Oxygen in the World

30 East 42d Street
New York

KOHL BUILDING
San Francisco

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

INTERNATIONAL

Marine Engineering

VOL. XXIV DECEMBER, 1919 No. 12

The Morse Dry Dock and Repair Plant 781

Description of the organization, shops, dry docks, and equipment of the Morse Dry Dock and Repair Company, Brooklyn, N. Y. History of the company and account of unusual repair work carried out.
Marine Engineering, December, 1919.

Increasing Stoke-Hole Efficiency 792

By A. Pohlman.

A plea for more scientific control of boiler operation on board ship.
Marine Engineering, December, 1919.

Merchant Marine Hearings in Washington 793

By Waldon Fawcett.

Comment on the information given by marine experts before Congressional Committees. Outline of the Greene bill. Sale of surplus ships.
Marine Engineering, December, 1919.

The Propulsive Efficiency of Single-Screw Cargo Ships 796

By Commander William McEntee, U. S. N.

Paper read before Naval Architects' Society showing effect of varying amount of parallel middle body and longitudinal coefficient simultaneously on a given ship.
Marine Engineering, December, 1919.

Economical Cargo Ships 799

By Alfred J. C. Robertson.

Paper read before Naval Architects' Society containing data from Shipping Board records showing cost of operation of different size vessels at varying speeds on 3,500 nautical mile voyage.
Marine Engineering, December, 1919.

Suggestions for the Profitable Operation of the American Merchant Marine 806

By Commander H. C. Dinger, U. S. N.

Brings out lack of co-ordinated national action in the shipping field. Suggests creation of Bureau of Maritime Commerce and discusses factors affecting economical ship operation.
Marine Engineering, December, 1919.

A World's Record in Shipbuilding 811

Detailed account of the building of the 1,215-ton destroyer *Reid* at the Squantum Works of the Bethlehem Shipbuilding Corporation in 45 working days.
Marine Engineering, December, 1919.

Some New Developments in Diesel Engine Construction in the United Kingdom 813

By Special London Correspondent.

New double-acting engine built by North British Diesel Engine Works—13,000-ton motorships for the Glen Line—Doxford's four cylinder, 3,000 horsepower engine.
Marine Engineering, December, 1919.

Electric Propulsion of Merchant Ships 814

By W. L. R. Emmet.

Paper read before Naval Architects' Society discussing progress in application of electric drive and its advantages as compared with geared turbines or reciprocating engines.
Marine Engineering, December, 1919.

Electrical Repairs on Ex-German Ships 818

By Joseph Stansbury Jones.

Alterations, replacements and repairs to electrical equipment damaged by sabotage.
Marine Engineering, December, 1919.

Naval Architects' Annual Meeting 823

Abstracts of papers and discussion at twenty-seventh general meeting of the Society of Naval Architects and Marine Engineers held in New York on November 13 and 14, 1919.
Marine Engineering, December, 1919.

Editorial Comment 834

Letters to the Editor 836

Crude oil motors in marine practice.
Lake system of dry docks.
Lubricating systems of geared turbines.
A belated tribute to Noah and his Nautilus launching experiment.

Letters from Marine Engineers 838

Main engine feed pump defect.
Wear of crank pin.
Repairs to fractured bilge pump.
Disabled piston of quadruple expansion engine

Questions and Answers 841

Shipbuilding and General Marine News 842

Personal 844

Marine Construction News of the Month 845

Published Monthly by THE ALDRICH PUBLISHING COMPANY, 6 East 39th Street, New York

Entered at New York Post Office May 11, 1906, as second-class matter under the act of March 3d, 1879. Copyright, 1919, by Aldrich Publishing Co., New York. International Marine Engineering is registered in the United States Patent Office. Copyright in Great Britain.

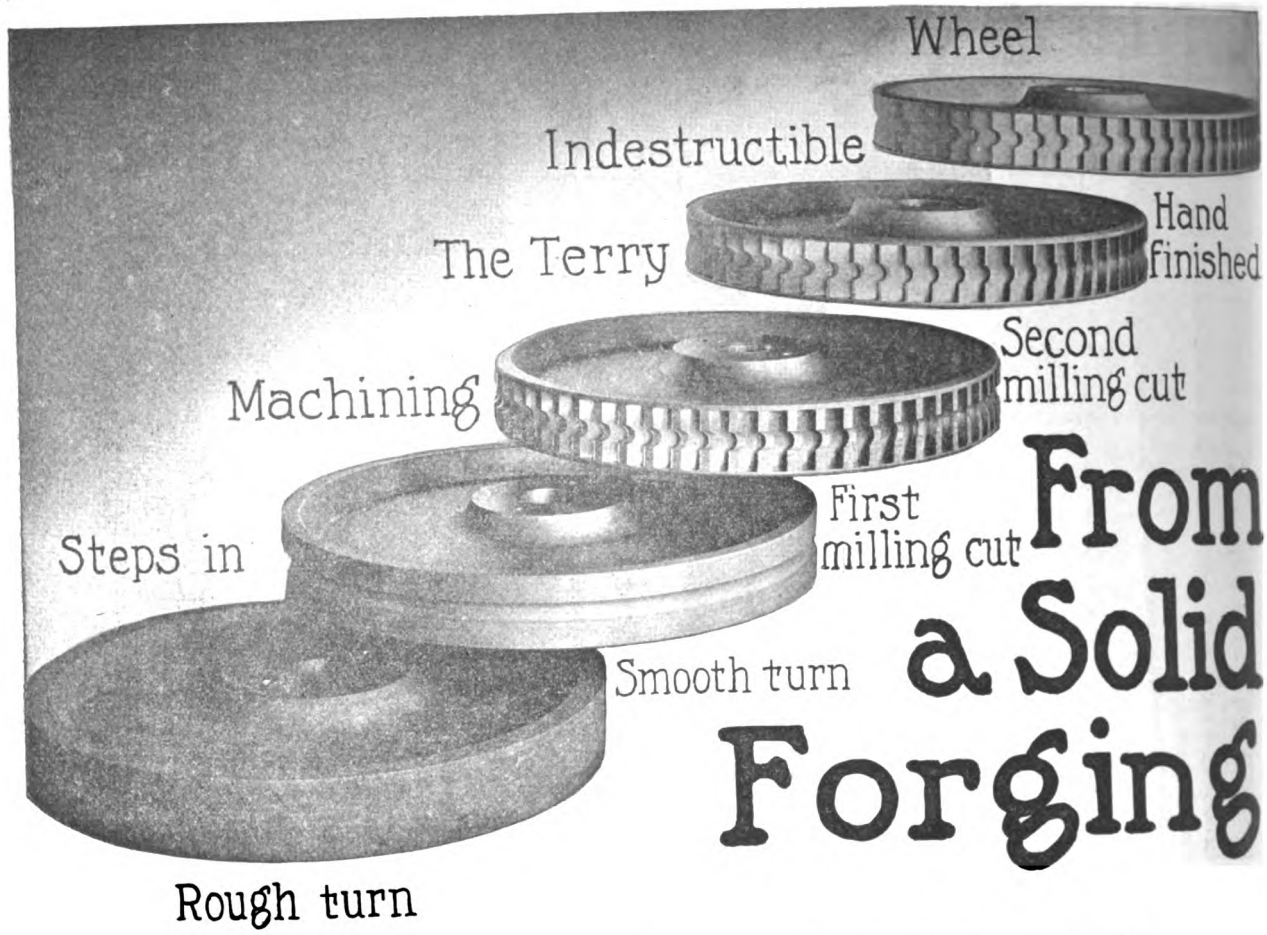
9,000 *copies of this issue were printed.*

SUBSCRIPTION PRICE: $2.00 per year, domestic; $3.00 foreign.

DAILY CAPACITY 150 TONS
25,000 KEGS ALWAYS IN STOCK
WRITE FOR PRICES AND MONTHLY STOCK LIST

BOILER MAKERS
Put an end to your troubles by using
PERFECTION (P) RIVETS
Have always stood the Guaranteed test
Every Rivet is made of Specially tested
CARNEGIE BASIC OPEN HEARTH STEEL
ANTHONY CARLIN MANUFACTURER
Office and Works CLEVELAND, OHIO

Generated on 2024-09-12 08:15 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



The average conception of a steam turbine is a delicate piece of apparatus containing hundreds of little vanes or blades receiving the impact of a flow of steam and passing each other at high rates of speed with very small clearances. *This is just what a Terry Turbine is not.*

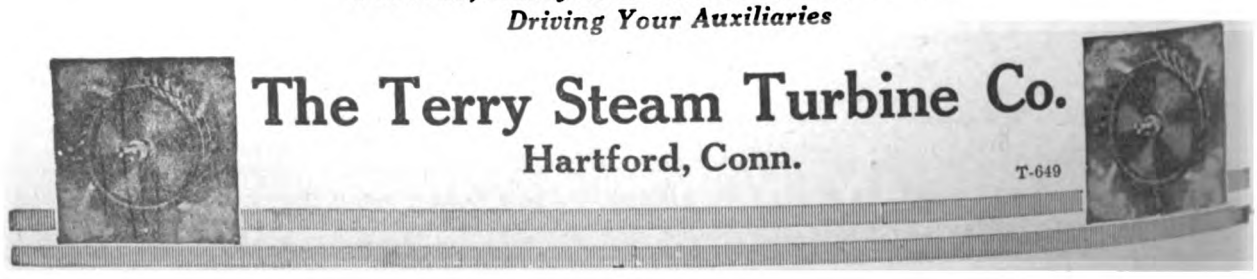
The above illustration unretouched shows the rotor in

THE TERRY TURBINE

in its various stages of completion from the rough turned forging of special composition steel through the smooth turning and boring process, the bucket milling and the final hand finishing. In this manner it can be seen that although the finished wheel looks like hundreds of blades set into discs, it is in reality one integral, solid piece of steel out of which have been cut a number of slots or buckets.

The blade-like portion between these buckets, being integral with the wheel, cannot work loose or pull out. There is large clearance between the moving blades and stationary members which makes it impossible for them to foul. Should this clearance become reduced the projecting rims would take care of any rubbing that might occur without doing any damage. As the side clearance is greater than an inch there is no fear of damage from end play.

For solid, sturdy construction Specify Terry for Driving Your Auxiliaries



Generated on 2024-09-12 08:59 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

America's Own

A tracing cloth,
national in use and *national* in popularity
—the only cloth of American make.

A tracing cloth to which you can entrust your choicest plan; upon which you can trace from the faintest pencil line—a super-transparent cloth which assures clear, legible tracings that retain an unusual degree of freshness even after much handling.

Supplied in rolls of 24-yard lengths and in widths of 26 in., 30 in., 36 in., and 42 in. Also in flat sheets, cut to the size you specify, printed in our own plant with border lines and corner card, with insoluble jet black ink, ready for use with no waste of cloth or of draftsman's time in lettering.

NATIONAL TRACING CLOTH is backed by the strongest possible guarantee. Every roll or cut sheet not merchantable, not free from blemish, will be replaced, anywhere.

If you are not now using NATIONAL TRACING CLOTH we confidently invite your personal test of NATIONAL for the purpose of comparison with the cloth you now use.

Send the coupon for a free sample sheet today. Test it thoroughly!

NATIONAL TRACING CLOTH CO.
SAYLESVILLE, R. I.

OTHER PRODUCTS

National Vellum *National Tracing Paper*
National Blueprint Cloth *National White Pencil Cloth*

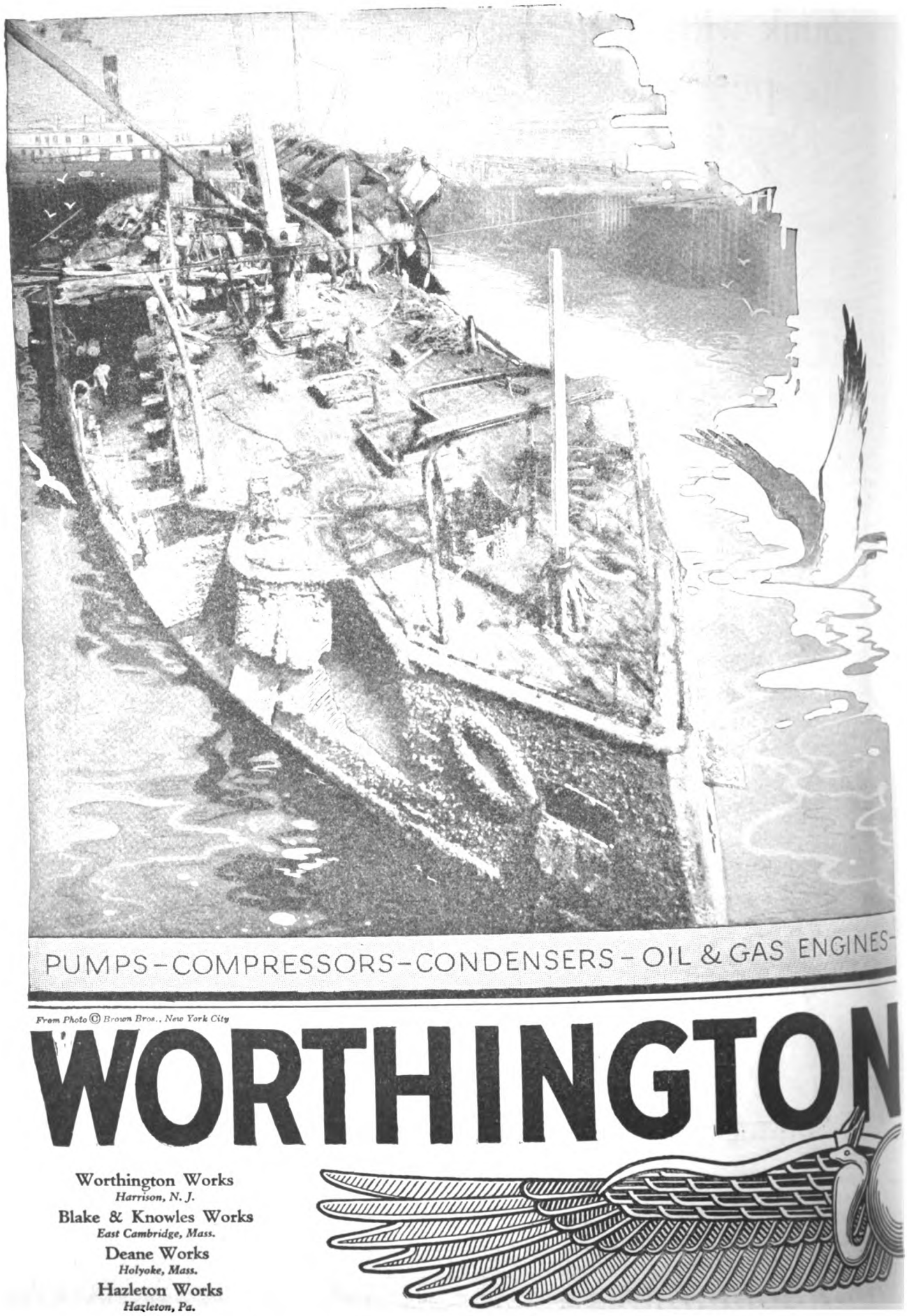
107-3

To THE NATIONAL TRACING CLOTH CO., Saylesville, R. I.
Please send me a sample sheet of NATIONAL TRACING CLOTH G for comparison with the cloth I am now using.

NAME _____
ADDRESS _____
FIRM OR COMPANY _____

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



From Photo © Brown Bros., New York City

WORTHINGTON

Worthington Works
Harrison, N. J.
Blake & Knowles Works
East Cambridge, Mass.
Deane Works
Holyoke, Mass.
Hazleton Works
Hazleton, Pa.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

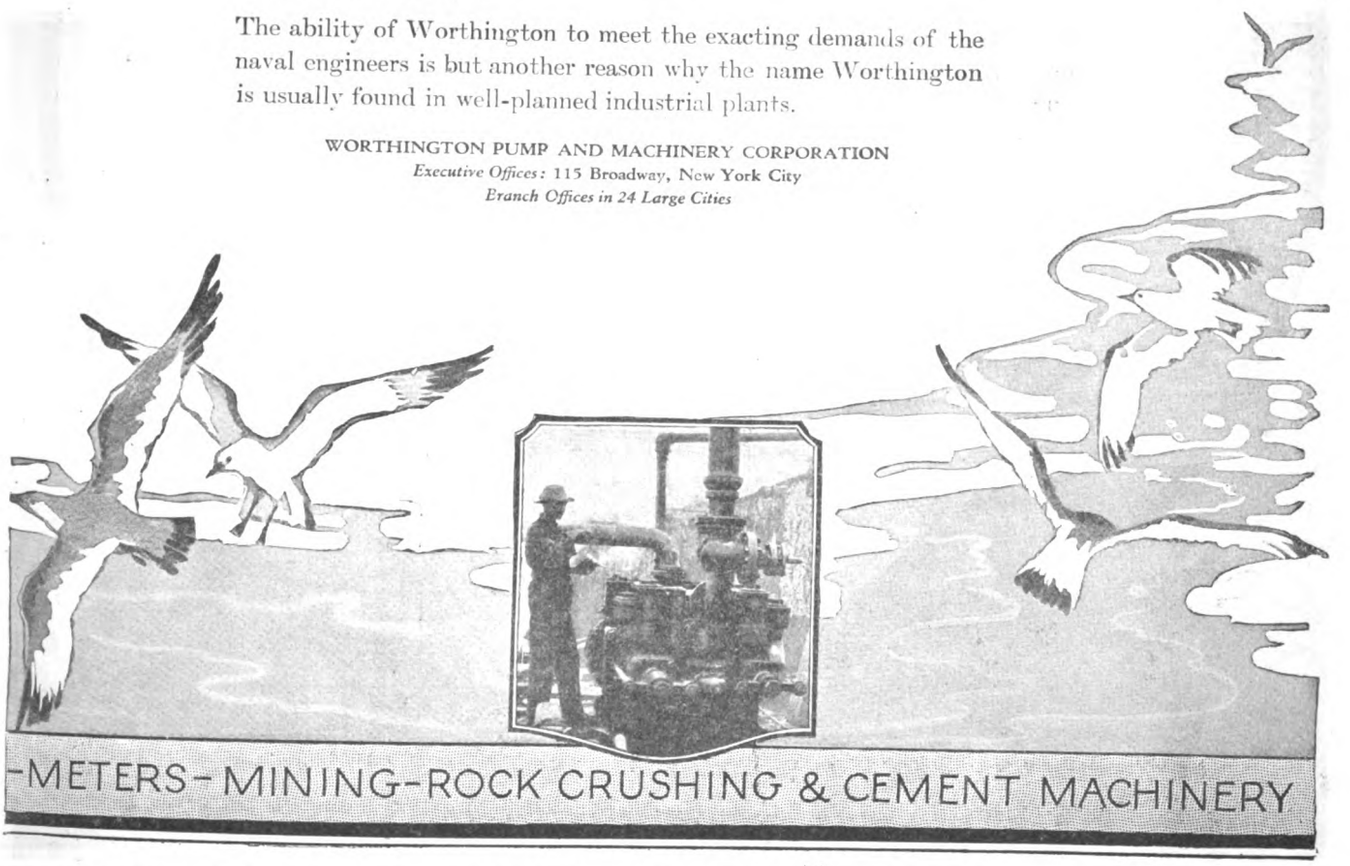
Sunk with the Maine, this pump helped to raise her

FOURTEEN years at the bottom of the sea—and still a good pump. That is the record of a Worthington Pump (made in our Blake & Knowles Plant) which went down in 1898 with the Maine. Several years ago, when the famous old battleship was raised, this pump with but two new parts—a piston rod and a valve rod—was connected up and assisted in unwatering the vessel.

That the Navy did not need this evidence of endurance and stamina, however, has been amply proven by the fact that most of the vessels of the American Navy are now equipped with Worthington pumps.

The ability of Worthington to meet the exacting demands of the naval engineers is but another reason why the name Worthington is usually found in well-planned industrial plants.

WORTHINGTON PUMP AND MACHINERY CORPORATION
Executive Offices: 115 Broadway, New York City
Branch Offices in 24 Large Cities



WORTHINGTON

Snow-Holly Works
Buffalo, N. Y.
Laidlaw Works
Cincinnati, Ohio
Power & Mining Works
Cudahy, Wis.
Gas Engine Work
Cudahy, Wis.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Westinghouse

Bringing Fuel Costs Down—

Before the war the Matson line operated two 15,000-ton passenger liners, the S. S. Matsonia and the S. S. Maui, between San Francisco and Honolulu.

With the exception that the Matsonia has reciprocating engines and a single screw, while the Maui has Westinghouse Geared Turbines and twin screws, these ships are otherwise alike.

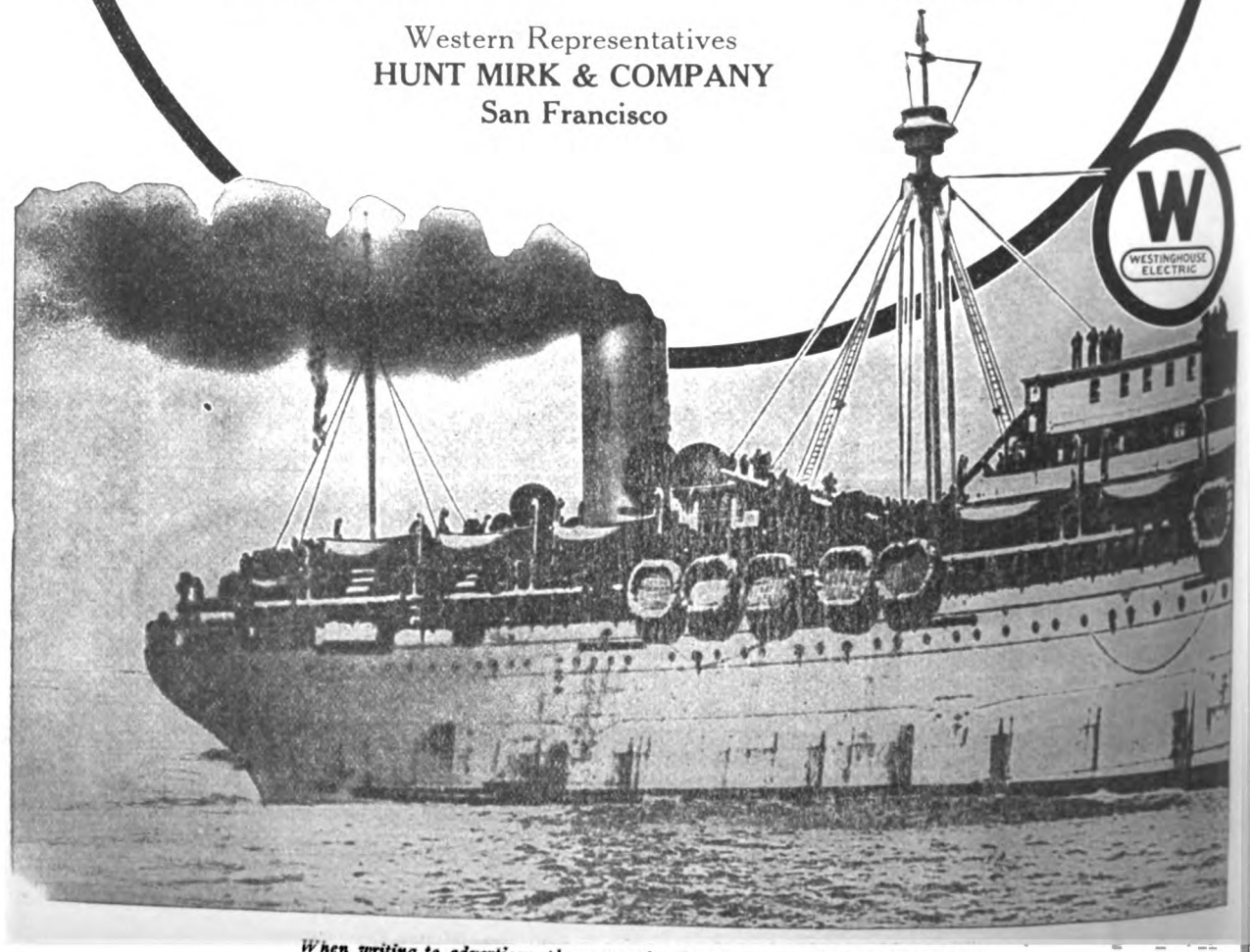
A careful record of the fuel oil consumption (sea steaming only) was kept on both ships for five voyages while both were in the same service and subjected to the same weather conditions, the difference in average voyage displacement being only eight tons. The result was a saving in favor of the Maui of 23%.

The general tendency toward turbine drive is indicated by the fact that within the past two years, 100 ships have been equipped with Westinghouse Propulsion Machinery.

Turbine drive affords not only a material reduction in fuel costs, but also a reduction in weight of equipment, more cargo-carrying space and a marked reduction in maintenance expense.

WESTINGHOUSE ELECTRIC & MANUFACTURING CO.
East Pittsburgh, Pa. **Washington, D. C.**

Western Representatives
HUNT MIRK & COMPANY
San Francisco



When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

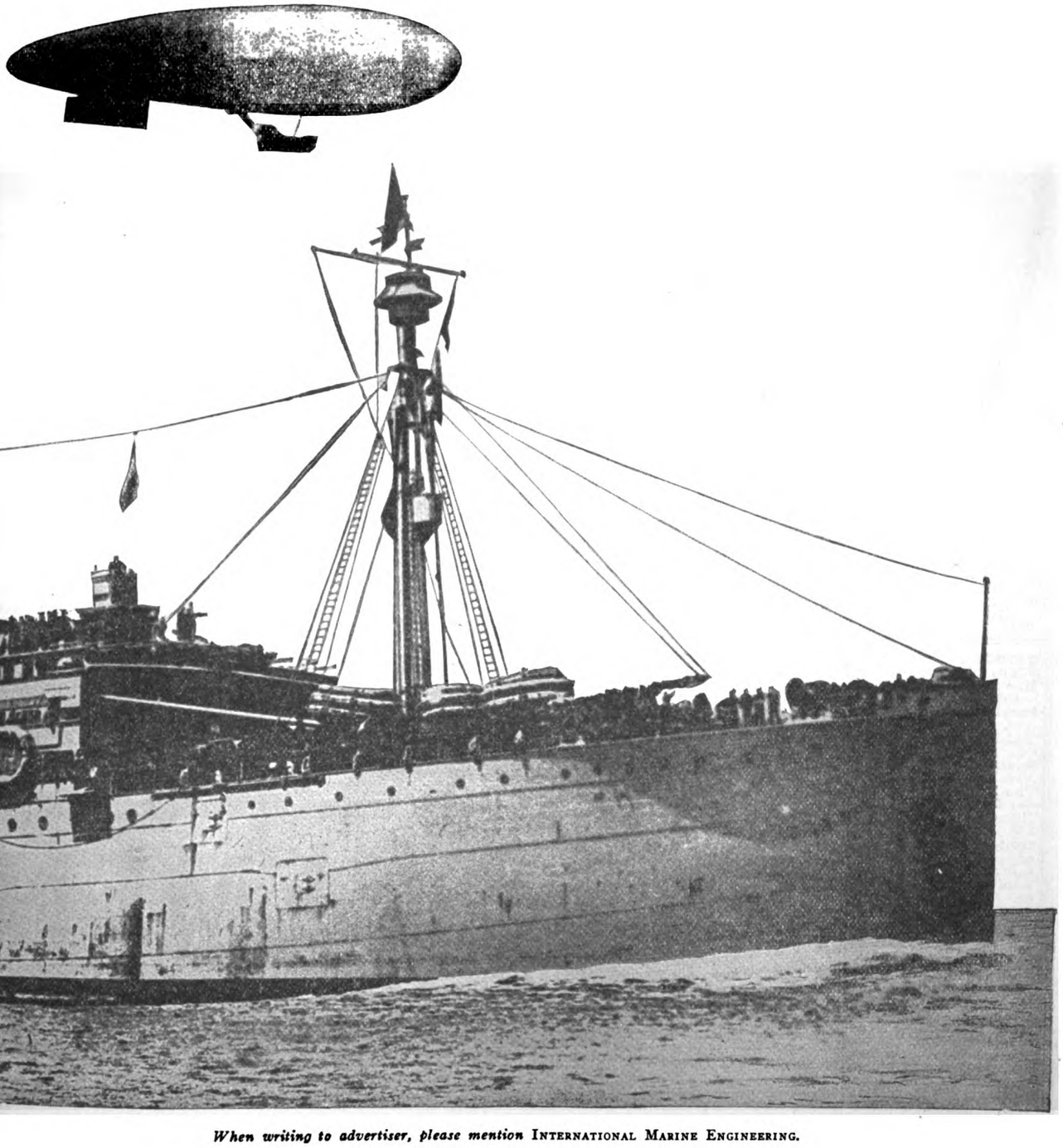
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

Marine Equipment

U.S.S MAUI



Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Best in Machine Tools For Marine Equipment Manufacture

WE BUILD machinery for ship shed use—keel bending machines, plate planers, garboard bending machines, flanging presses, shears, radial drills—machinery for the manufacture of the heaviest marine boilers, special equipment for handling armor plate, guns and gun mounts.

For marine engine and steam turbine manufacture our line of heavy duty machinery is representative of the best practice in tool construction, and can be used with excellent results.

Besides this equipment we also build a complete line of Steam Hammers, comprising Forge, Drop, Board Drop and Tilting Hammers in capacities up to the largest ever built. They are entirely dependable and are designed to operate continuously with the least attention.

Niles Cranes will be found to answer the various requirements of ship yard and dry dock, as they include Electric Traveling Cranes from 5 to 250 tons, and larger capacity, Gantry Cranes, Yard Cranes, Wall Cranes as well as Grab Bucket Hoists and Trolleys.

We also Build

PRATT & WHITNEY PRECISION MACHINE TOOLS

As originators of the systems of interchangeable manufacture, the line of Precision Machine Tools as developed in our Pratt & Whitney Shops is unequalled for accuracy and refinement. Many of the machines that go out under the Pratt & Whitney name are practically automatic in action and are designed to permit the accurate machining of intricate and delicate parts without requiring highly skilled attention.

We mention some recent additions to our line which are special and original with us: Automatic Milling Machines, Horizontal Automatic Profiling and Cam Cutting Machine, Vertical Shapers, Jig Boring Machines, Contour Cutter Grinder.

PRATT & WHITNEY SMALL TOOLS AND GAUGES

Pratt & Whitney Small Tools enjoy an enviable reputation for high quality that has been well earned in the high production shops of the country. In shipyards and railroad shops where stamina as well as accuracy are required of the small tool equipment, Pratt & Whitney tools have more than held their own.

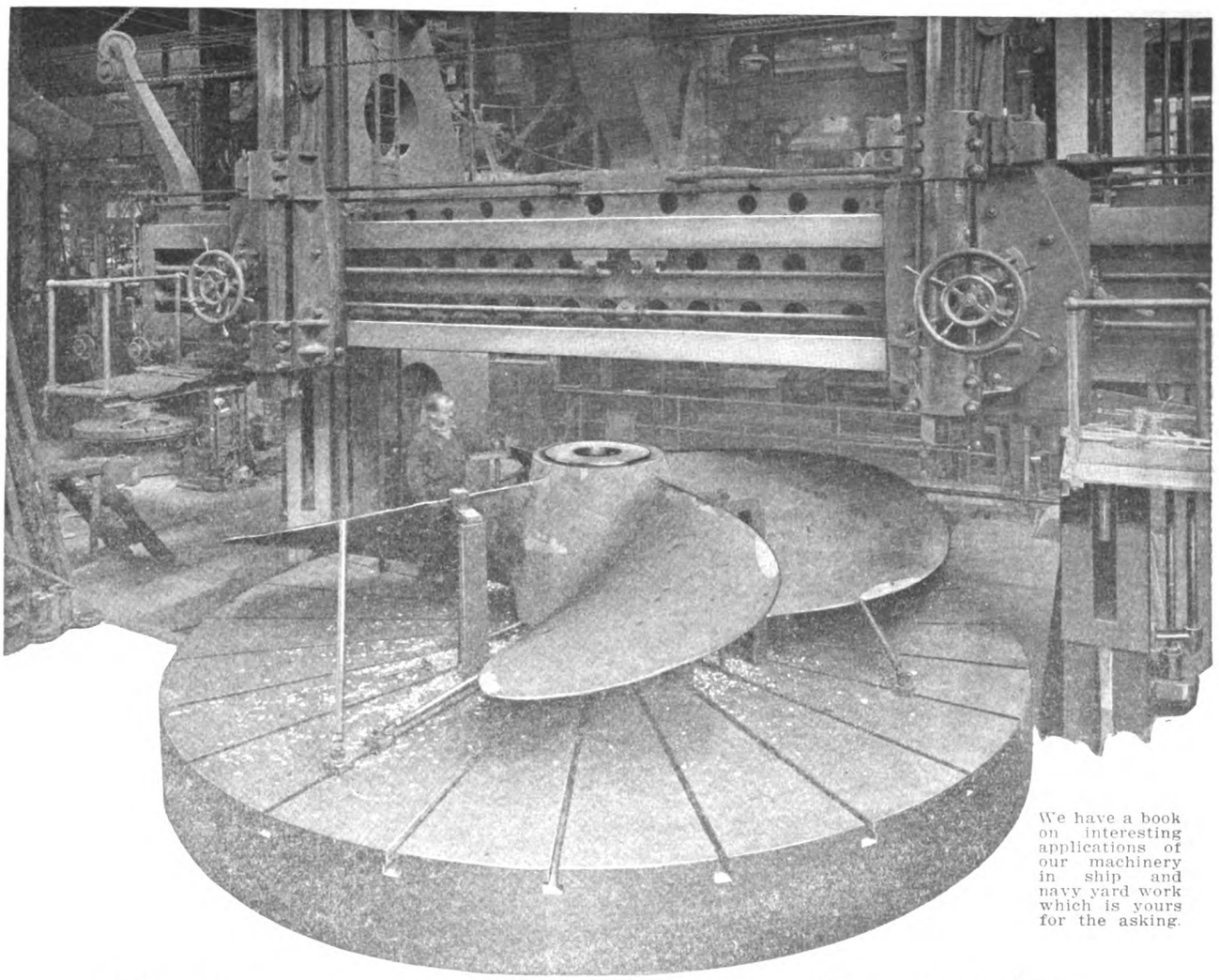
We can honestly recommend them—our line is complete. Prompt service is assured at our nearest store, where P. & W. Small Tools are carried in stock for immediate delivery. Place your order there today. We will be glad to send you copies of our catalogues, "Small Tools," "Gauges and Standards."

OFFICES & AGENCIES: **Boston**—93-95 Oliver St. **Philadelphia**—405 N. 21st St. **Pittsburgh** — 325 Seventh Ave. **Cleveland, O.**—The Niles Tool Works Co., 730 Superior St. **Rochester**—116 South Ave. **Hamilton, O.**—The Niles Tool Works Co. **Cincinnati** — The Niles Tool Works Co., 338 W. Fourth St. **Detroit**—Kerr Bldg. **Chicago**—571 W. Washington Blvd. **St. Louis**—516 N. Third St. **Birmingham, Ala.**—2015 First Ave. **Los Angeles**—454 E. 3d. St. **San Francisco**—16 to 18 Fremont St. **Seattle**—1307 L. C. Smith Bldg. **London, Eng.**—25 Victoria St. S. W. **For Colorado, Utah, Wyoming and New Mexico** — Hendrie & Bolthoff Manufacturing & Supply Co., Denver. **For Canada** — The John Bertram & Sons Co., Ltd. Dundas, Montreal, Toronto, Winnipeg and Vancouver.

NILES-BEMENT-

GENERAL OFFICES,

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



We have a book on interesting applications of our machinery in ship and navy yard work which is yours for the asking.

Machining a Propeller for the "Leviathan"

THIS photograph of a N-B-P 34-Ft. Extension Boring and Turning Mill in the Philadelphia shops of the William Cramp and Sons Ship and Engine Building Co. is interesting in showing the class of work on which a great deal of our machinery has first call.

This mill, which has a capacity of 20 to 33 feet bored diameter, by 15 feet height of bore, is being used on a Parsons' Manganese Bronze Propeller for the U. S. S. "Leviathan." Diameter of wheel, 16 ft. 6 in.; weight, 41,000 lbs.

Where work larger than the ordinary is to be handled, N-B-P machine tools are generally depended on to get it out.

POND COMPANY

111 BROADWAY, NEW YORK

PRATT & WHITNEY SMALL TOOLS IN STOCK AT

New York: 326 Hudson St. **Boston:** 93-95 Oliver St. **Philadelphia:** 405 N. 21st St. **Cleveland:** 730 Superior St. **Detroit:** Kerr Bldg. **Chicago:** 571 W. Washington Blvd. **St. Louis:** 516 N. 3rd St. **Cincinnati:** 338 W. 4th St. **Birmingham, Ala.:** 2015 First Ave. **San Francisco:** 16-18 Fremont St. **New Orleans, La.:** C. T. Paterson Co., Ltd. **St. Paul, Minn.:** Robinson Cary & Sands Co. **Canada:** Pratt & Whitney Co. of Canada, Ltd.: Dundas, Montreal, Toronto, Winnipeg and Vancouver.

Place Your Order Today

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

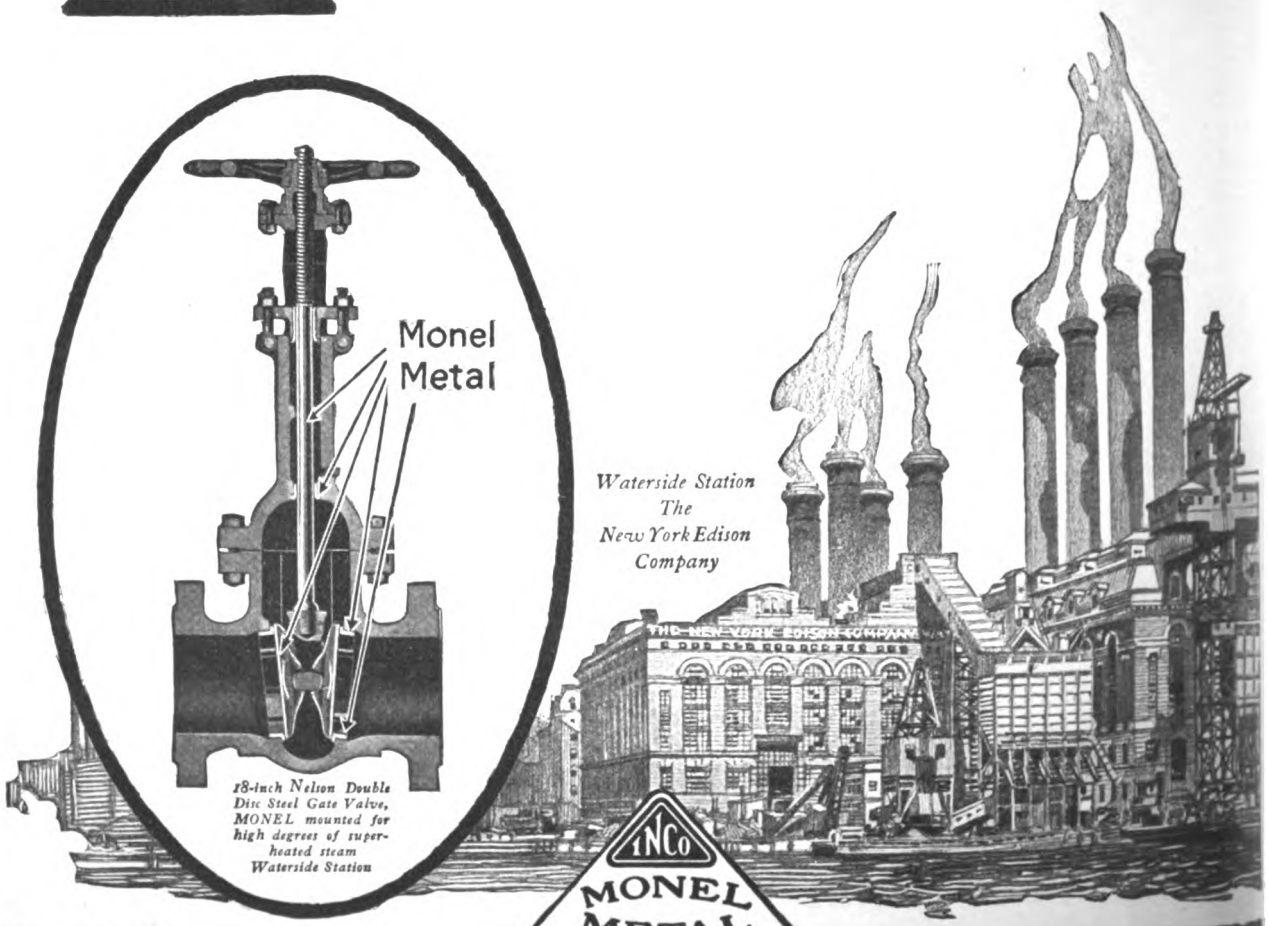
Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Maintaining New York Edison Service with Valves, Pumps and Condensers fitted with

Monel

INCo

18-inch Nelson Double Disc Steel Gate Valve, MONEL mounted for high degrees of superheated steam Waterside Station



Waterside Station The New York Edison Company

INCo MONEL METAL TRADE MARK

THE INTERNATIONAL NICKEL COMPANY

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

metal

Uninterrupted Electrical Service

THE New York Edison Company has put MONEL Metal to a variety of uses in valves, pumps and other parts of its Water-side station equipment where resistance to wear and corrosion is of paramount importance in the operation of this efficient power plant.

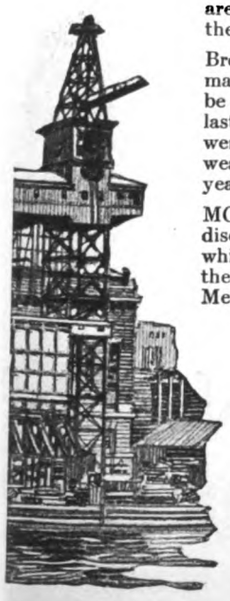
Practically all the main valves handling superheated steam are equipped with MONEL Metal seats; those that are not so equipped are being fitted with MONEL as rapidly as the seats wear out.

Bronze stems for controlling valves on the main turbines corroded and scaled and had to be replaced in two or three years. Steel stems lasted but a short time. MONEL Metal stems were tried and after two years' service show no wear or corrosion and are good for many more years.

MONEL Metal is also used in the suction and discharge valves in the step-bearing pumps which pump cold water at 1400 lbs. pressure—the hot well pumps are equipped with MONEL Metal rods—MONEL Metal bolts, nuts and washers are used in the condensers and wherever salt water conditions exist. MONEL is giving exceptional service wherever it has replaced other metals in this plant.

MONEL Metal is a natural alloy of nickel and copper — non-corrodible — strong as steel — tough and ductile. Withstands acids, alkalies, high temperatures and erosive action of hot gases and *superheated steam*. Can be cast, forged, rolled, machined, drawn, soldered, brazed and welded by electric or oxy-acetylene method. Takes and retains a perfect nickel finish.

MONEL Metal is manufactured in the form of rods, castings, wire, strip stock, sheets, etc. Some of its common uses, other than valve trim and pump rods, are pump liners; spark plug electrodes; aeroplane parts; mine screens; pickle pins; marine fittings; oil, gas and refrigerating machinery; dyehouse and dairy equipment and screw machine products. The MONEL booklets show the many uses for which MONEL Metal has proved superior.



Twelve years' experience in MONEL Metal is at your service through our Sales or Technical Department. Write us as to whether MONEL Metal could replace with greater satisfaction the material you are now using.

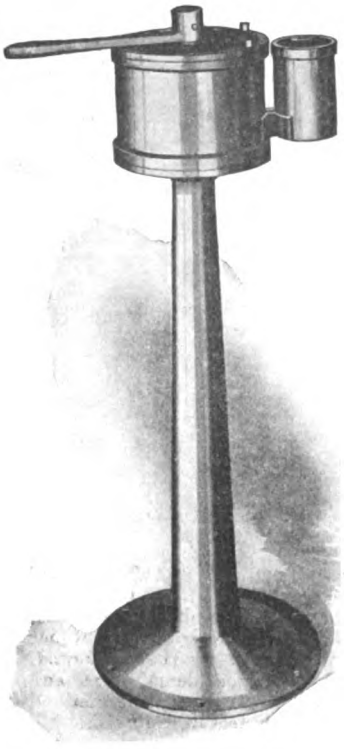
The International Nickel Company
43 Exchange Place New York, N. Y.

INCO NICKEL TRADE MARK

THE INTERNATIONAL NICKEL COMPANY

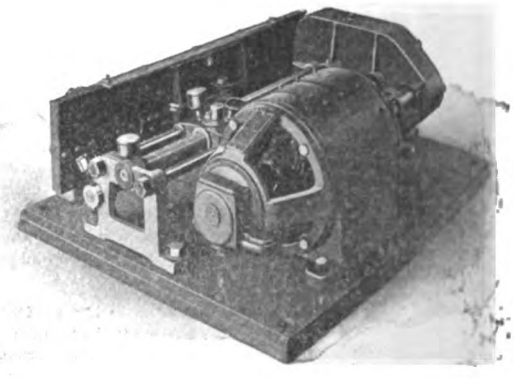
Generated on 2024-09-12 08:29 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

A Great



In fact it is rightly called "the Ideal Combination." The Benson Electric Telemotor is simple, positive and instant in operation. Not affected by air pockets or temperature changes. Always ready to work, practically fool-proof, absolutely accurate, low in running expense.

Benson
Electric Telemotor



THE AMERICAN ENGIN

PHILADELPHIA,

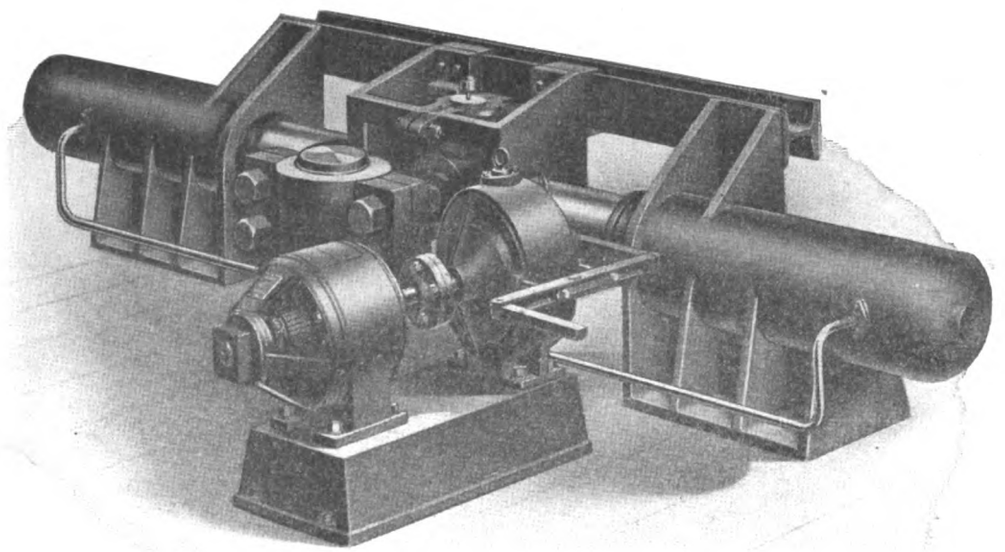
When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:19 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

Combination



The American Electro-Hydraulic Steerer

prompt and powerful in action, accurate, sensitive, great holding power with ample provision for relief and recovery in case of overstrain due to heavy seas, economical in operation, and can be built to meet any particular space requirements. In proportion to its size it is the most powerful steerer built.

You will be satisfied with the combination.

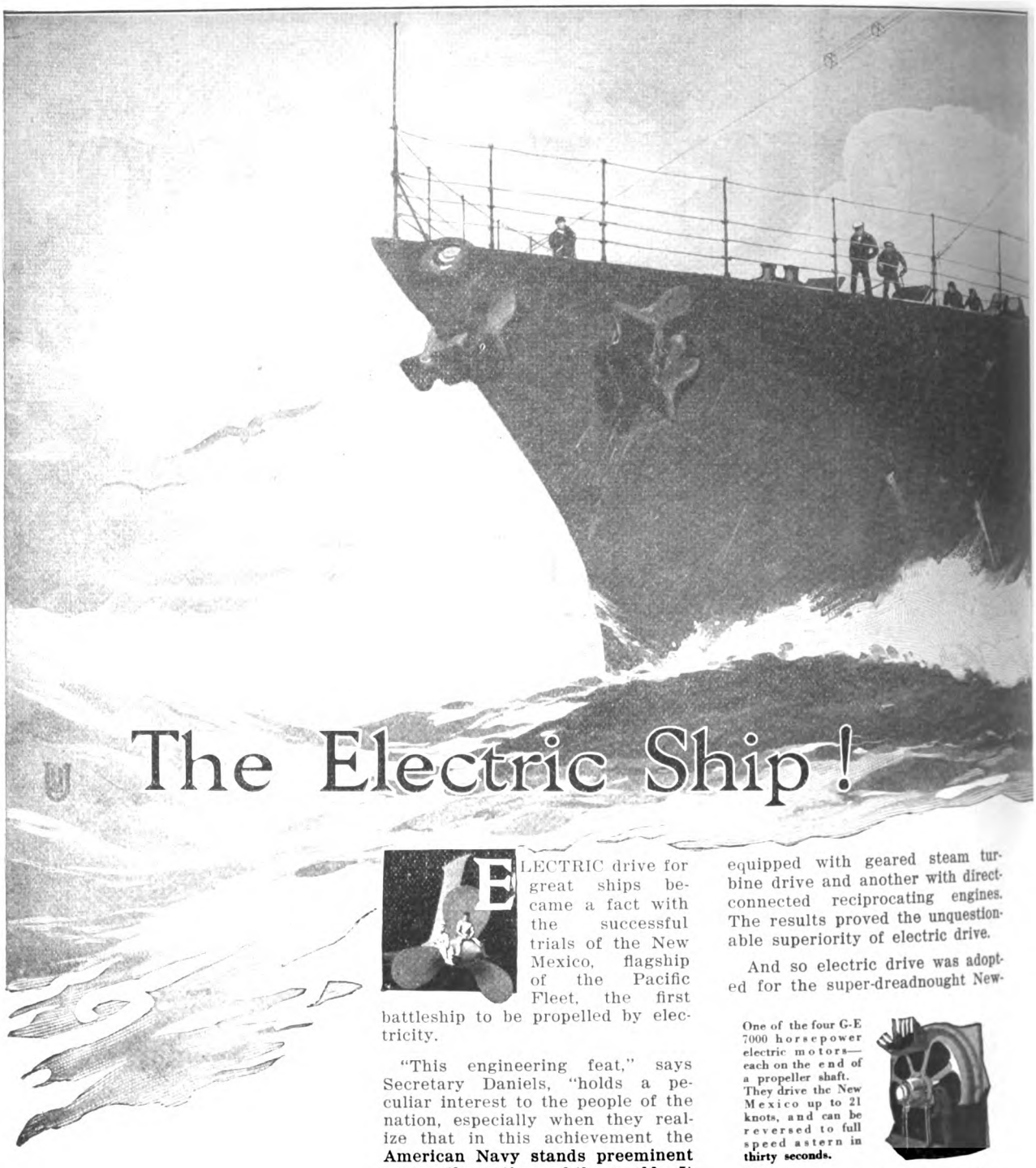
EERING COMPANY
PENNSYLVANIA

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



The Electric Ship!

ELECTRIC drive for great ships became a fact with the successful trials of the New Mexico, flagship of the Pacific Fleet, the first battleship to be propelled by electricity.

"This engineering feat," says Secretary Daniels, "holds a peculiar interest to the people of the nation, especially when they realize that in this achievement the **American Navy stands preeminent among the nations of the world. It marks an epoch in naval progress." It is another great advance in the mastery of the sea.**

Ten years ago electric propulsion for vessels was being discussed by eminent engineers. But it remained for W. L. R. Emmet, consulting engineer of the General Electric Company, in co-operation with the Bureau of Steam Engineering, U. S. Navy, to apply it to large ships.

Five years ago electric drive was installed on the collier Jupiter, while one of her sister ships was equipped with geared steam turbine drive and another with direct-connected reciprocating engines. The results proved the unquestionable superiority of electric drive.

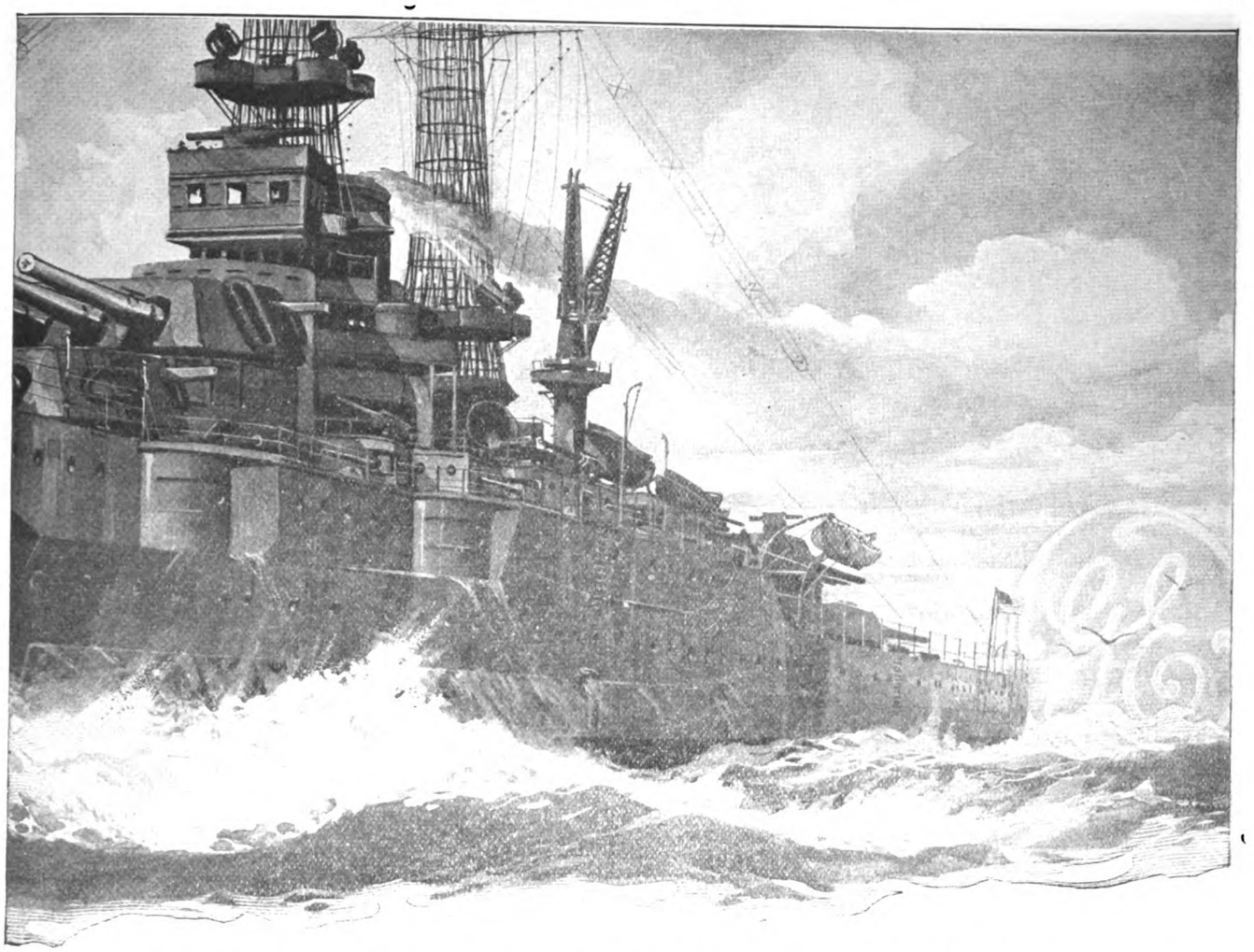
And so electric drive was adopted for the super-dreadnought New-

One of the four G-E 7000 horsepower electric motors—each on the end of a propeller shaft. They drive the New Mexico up to 21 knots, and can be reversed to full speed astern in thirty seconds.

Mexico, with 32,000 tons displacement and a speed of 21 knots. Steam from her oil-burning boilers drives two Curtis turbo-generators, which generate electric current and feed it through a central control to four 7,000 horsepower motors, each coupled to a propeller. Two thousand additional horsepower is generated for lighting, steering, turret machinery, ventilation, winches, windlasses, cranes, radio, telephony, searchlights, laundry, refrigeration, baking, machine shop—making the New Mexico an electric ship indeed!

GENERAL

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



As a result of the performance of the Jupiter and the New Mexico the United States Navy has adopted electric drive for all its capital ships now under construction or which have been authorized.

The operator of this control board—in the center of the ship—controls, through a few levers, the speed and power of the turbo-generavators and propelling motors, in immediate response to telegraphic orders from the bridge.

Its success in the Navy forecasts the rapid adoption of electric drive for merchant ships. In the case of any large ship now operating with reciprocating engines on long voyages, electric propulsion, if substituted, would afford enough improvement to pay for itself in three years.

Admiral Benson, until recently Chief of Naval Operations, says, "...as soon as the merits of this system become known commercially, electric propulsion will prove its practical value in the Merchant Marine just as thoroughly as it has to the Navy." He states that he regards "...electricity as the most economical motive power, from every viewpoint, so far developed for large units."

The chief advantages of electric drive are:

1. **Economy**—Fuel economy is not only apparent in the operation of electrically propelled ships, but decreased fuel storage room makes way for valuable cargo space.

2. **Reliability**—Electric propelling machinery has no motion other than simple rotation. Its simplicity in transmitting power from turbine to propeller eliminates the trouble caused by large reciprocating parts or multiplicity of reduction gears.

Two of these 14,000 horsepower Curtis turbo-generators, singly or together, produce current for any or all of the four motors.

3. **Flexibility of Installation**—Electric motors may be placed in the stern, instead of amidships, greatly reducing the length of propeller shafts and shaft alleys. The turbines can be near the boilers in compact quarters, doing away with many feet of steam piping, and adding valuable space. The power is transmitted the electric way—through small cables. The control can be in any convenient place, even on the bridge.

4. **Safety**—Electric drive gives vastly greater safety than the old types, because each unit can be isolated in its own water-tight compartment. In collision or other accident the throwing of a switch disconnects a damaged motor or shaft, and in the case of more than one propeller, the power is transmitted to the remaining propeller.

The building of electric propulsion machinery for ships of the Navy and Merchant Marine is but one of the many activities of the General Electric Company in its service to the Government, to transportation, to industries, to science, to cities and to the home.

An illustrated booklet describing the New Mexico, entitled, "The Electric Ship" will be sent upon request. Address General Electric Company, Desk 30, Schenectady, New York.

E L E C T R I C

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Use Red Cross Christmas Seals

BRUNSWICK ICE MACHINES

BRUNSWICK REFRIGERATING CO.

Marine Department

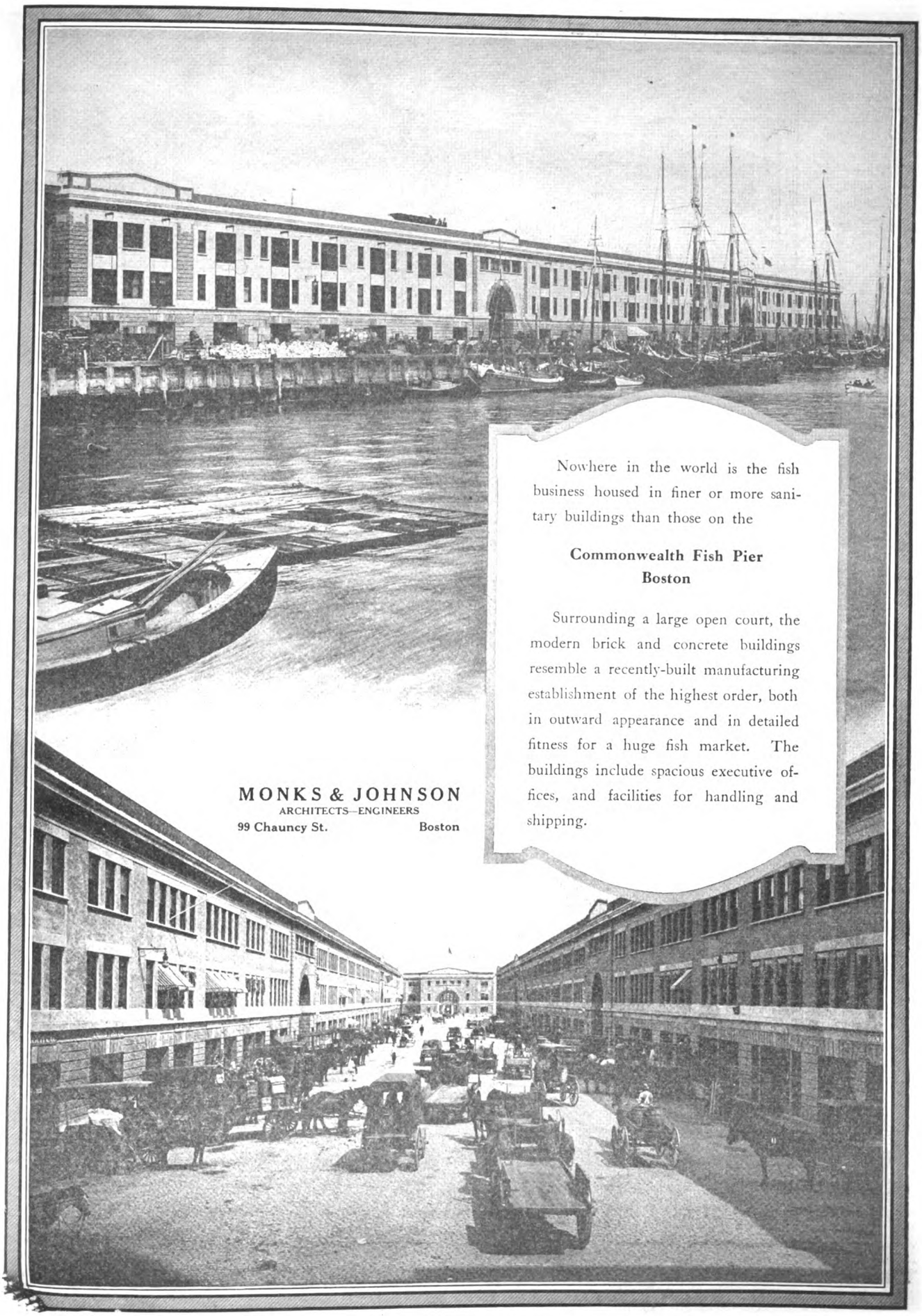
NEW BRUNSWICK NEW JERSEY

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

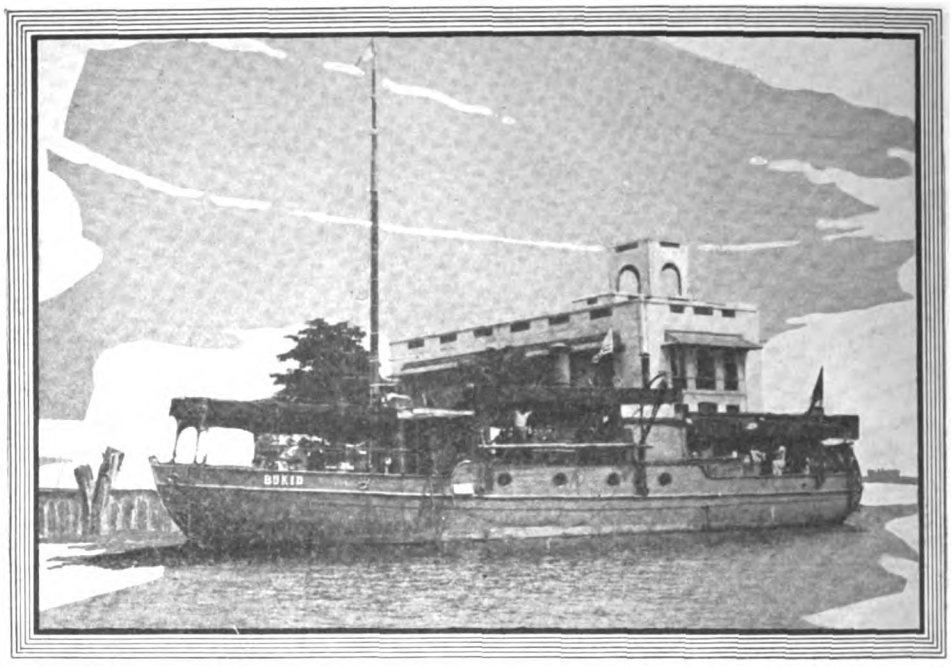
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN


Nowhere in the world is the fish business housed in finer or more sanitary buildings than those on the
Commonwealth Fish Pier
Boston
Surrounding a large open court, the modern brick and concrete buildings resemble a recently-built manufacturing establishment of the highest order, both in outward appearance and in detailed fitness for a huge fish market. The buildings include spacious executive offices, and facilities for handling and shipping.
MONKS & JOHNSON
ARCHITECTS—ENGINEERS
99 Chauncy St. Boston

Generated on 2024-09-12 08:27 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Motor Boats in the port of Cebu, P. I. Total 1750 H. P.—of which 1580 H. P. are "C-O" Oil Engines

The "Bukid" shown above is one of twenty-two vessels in Cebu that are powered with Fairbanks-Morse "C-O" oil engines. She is 60' long, 15' wide, draught loaded 8' 9", speed 8 knots—powered with two 45 H. P. "C-O" Engines. Other "C-O" powered vessels in Cebu range from the "Vicente" a 42 footer with a 30 H. P. "C-O" to the "Sadie"—a 150 foot boat with two engines of 100 H. P. each. On some of these boats—former steam vessels—the "C-O" fuel oil economy has cut operating cost to one-fourth of former cost—from 15 to 30 tons more cargo space is available—and former money losers are now making liberal profits. Let our Sales Engineers give you facts and figures that show why the most efficient and economically operated work boats—in each industrial fleet—from icebound coasts to torrid bays—are powered with Fairbanks-Morse "C-O" Marine Oil Engines.

Fairbanks, Morse & Co.
MANUFACTURERS CHICAGO

Engines - Pumps - Motors - Hoists - Air Compressors - Fairbanks Scales - Sheffield Motor Cars - Stand pipes - Coaling Stations - Etc.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

United States Shipping Board Emergency Fleet Corporation

Offers For Sale

116 Steamship Hulls 5 Sailing Vessels 61 Converted Barges

Wood Construction of the following Type and Tonnage:

Steamship Hulls	Converted Barges	Sailing Vessels
108 *Ferris*, 3850 t.	55 *Ferris*, 3550 t.	2 *Kirby*, 2000 t.
4 *Gray's Harbor*, 4300 t.	3 *Hough*, 4400 t.	3 *Ferris*, 3850 t.
2 *Geary*, 5000 t.	2 *Allen*, 3850 t.	
2 *Hough*, 4300 t.	1 *Continental*, 1600 t.	

Price Bare Hulls

Ferris Type, $75,000 Other Types, $21.40 per D.W.T.

Any equipment now on hulls to be paid for in accordance with an appraisal under our standard bill of material.

Hulls Are Moored at:

Portsmouth, N. H.; Wilson's Point, Conn.; Hog Island, Pa.; Beaumont, Texas; Lake Union, Seattle, Wash.; Alameda, Calif.; Columbia Slough, Portland, Ore.; Coos Bay, Ore.

These hulls are in various stages of completion. Some finished, others on the ways, at various shipyards in the Atlantic, Gulf and Pacific Coasts, which permits the purchaser making changes to suit his requirements.

Built to requirements of American Bureau of Shipping or British Lloyd's Register they represent, at above price, extraordinary value. A temporary certificate of classification furnished with each vessel so far as constructed.

A complete equipment as specified in Bill of Material No. 500 for Ferris Hulls will be furnished on the basis of $100,000 for each vessel.

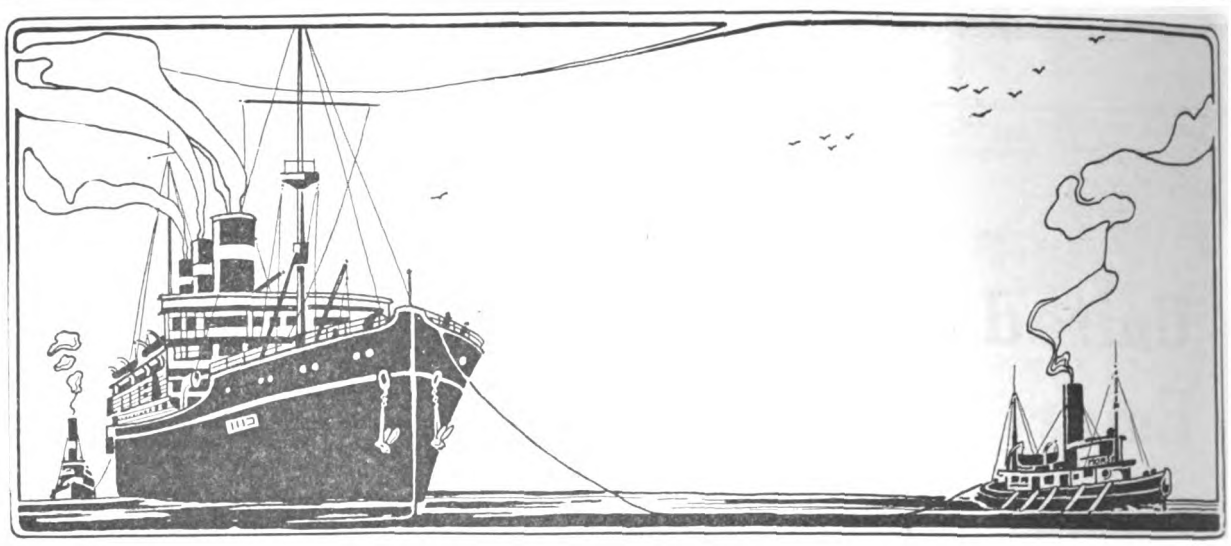
Further data may be had on application to Supply and Sales Division, United States Shipping Board Emergency Fleet Corporation, 140 N. Broad St., Philadelphia, or at any of the following district sales offices:

139 Centre St., New York City; Custom House, Boston, Mass.; 140 N. Broad St., Phila., Pa.; Hibernia Bank Bldg., New Orleans, La.; 922 Edison Bldg., Chicago, Ill.; Northwestern Bank Bldg., Portland, Ore.; Securities Bldg., Seattle, Wash.; 369 Pine St., San Francisco, Calif.

U. S. SHIPPING BOARD EMERGENCY FLEET CORPORATION

140 NORTH BROAD STREET, PHILADELPHIA

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



From the time a Morse Tug meets your ship, until the repairs are completed, Morse Service stands out---Unexcelled

Our estimators are prompt and careful in their work. You are assured courteous attention and a thorough, satisfactory repair job if you place your contract with us.

Morse service is speedy, reliable and efficient. We have a self contained plant with every facility for handling all classes of repairs and conversions.

The largest sectional floating dry dock in the world is here. It can raise a vessel of 30,000 gross tonnage and 725 feet long. An ordinary tramp steamer can be lifted in 18 minutes. Our No. 1 dry dock has a capacity of 15,000 tons.

A reliable fleet of our own ocean-going tugs and ice breakers, dredges, welding barges, floating machine shops and other special harbor craft is at your disposal.

A new heavy marine forge shop capable of turning out iron, steel and alloy forgings to suit every requirement up to 70,000 pounds is ready for operation, situated in a network of railroads and served by Morse lighters. There are no delays due to shipments.

Whether your boat is crippled, barely able to make port, or merely needs a new coat of paint, get our figures on the job if you want first class, efficient and skilled workmanship. If you are not already acquainted with Morse Service, you should be, and this is the opportune time.

The following departments are complete organizations within our own yard, ready to serve your particular need:

Boiler making and repairing, pipe fitting, pipe covering, plumbing, electrical work, copper smithing, sheet metal work, machinists, complete wood working departments, painting, wood caulking.

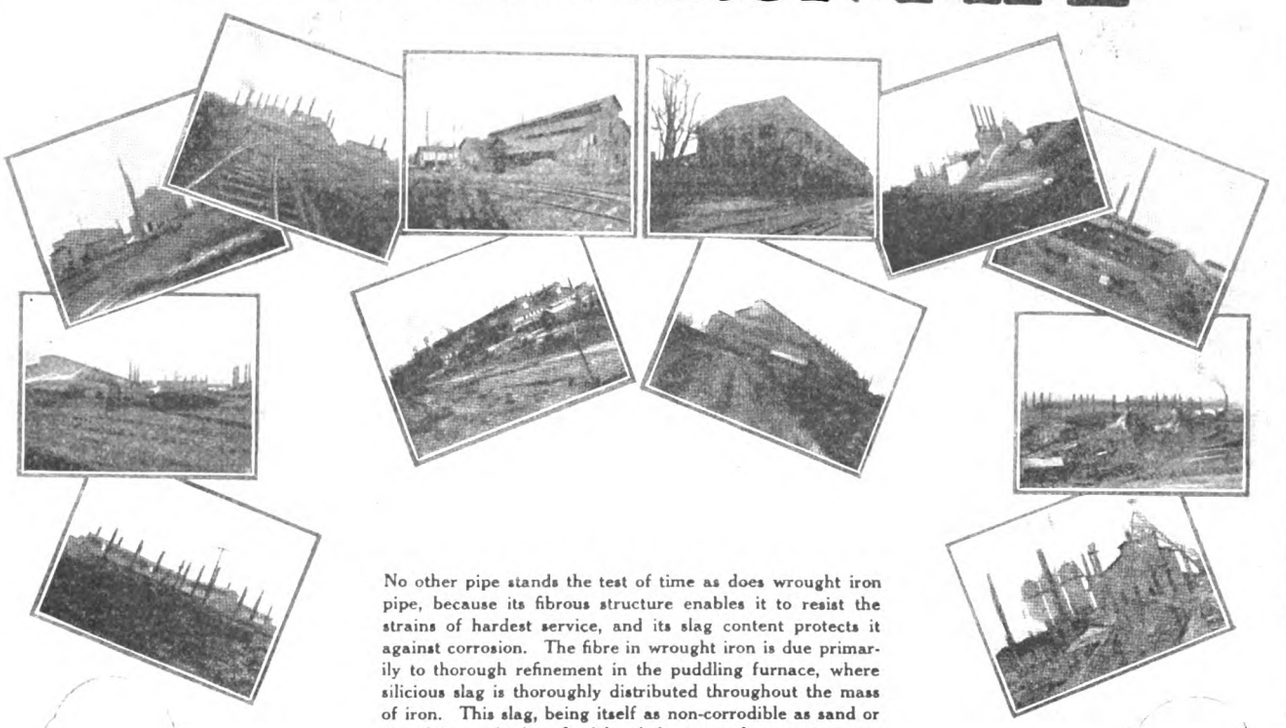
MORSE DRY DOCK & REPAIR CO.

Telephone Sunset 5100

Ft. of 54th to 57th Sts., Brooklyn, N. Y. Cable Address: Pyrosison, N.Y.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

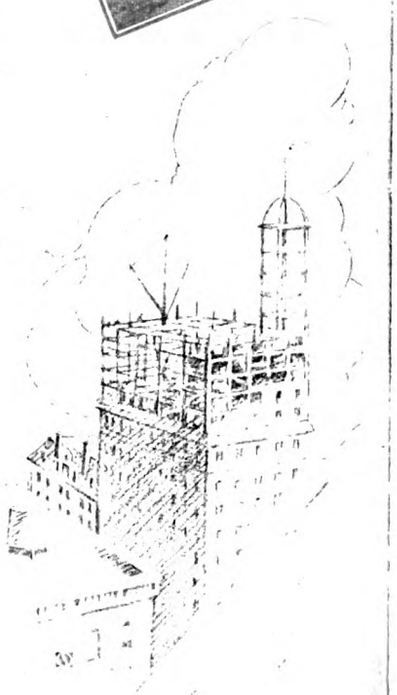
READING
WROUGHT IRON PIPE



No other pipe stands the test of time as does wrought iron pipe, because its fibrous structure enables it to resist the strains of hardest service, and its slag content protects it against corrosion. The fibre in wrought iron is due primarily to thorough refinement in the puddling furnace, where silicious slag is thoroughly distributed throughout the mass of iron. This slag, being itself as non-corrodible as sand or porcelain, multiplies the life of the iron wherever it is exposed to the corrosive effects of moisture or acid.

The fourteen plants of the Reading Iron Company are today producing America's largest output of wrought iron pipe. They are equipped with modern machinery, manned by skilled workmen, directed by executives responsible for the development of the most advanced methods of pipe manufacture.

The Reading Iron Company, alone among manufacturers of wrought iron pipe, controls its entire production from the great blast furnaces which make its own pig iron to the modern shipping platform where huge magnet cranes daily load tons of the finished pipe upon cars destined for every section of the country. With seventy-one years of experience in the field, with modern mechanical equipment, and with twice the capacity of any other manufacturer of wrought iron pipe in the world, the Reading Iron Company is in a position to render unusual service to users of pipe who seek quality and economy through years of satisfactory service.

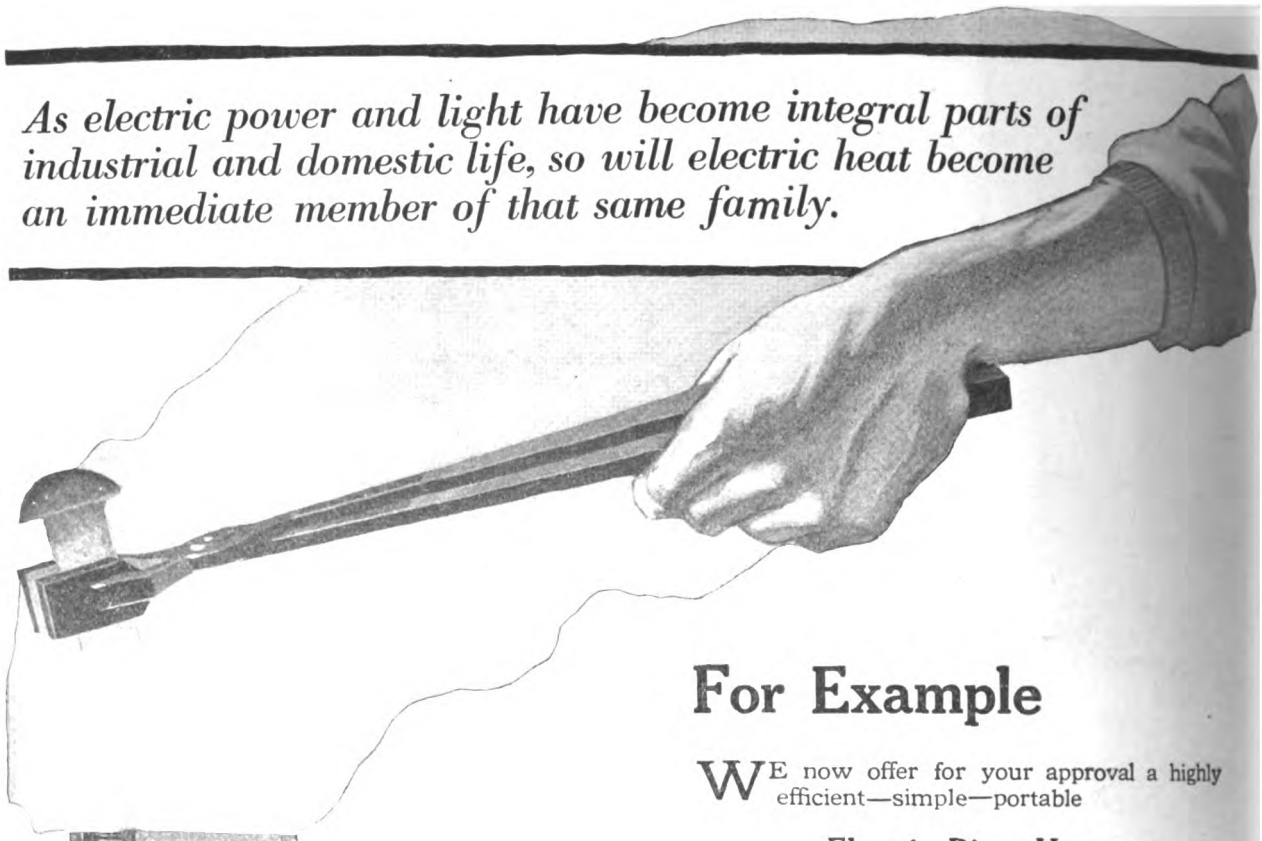


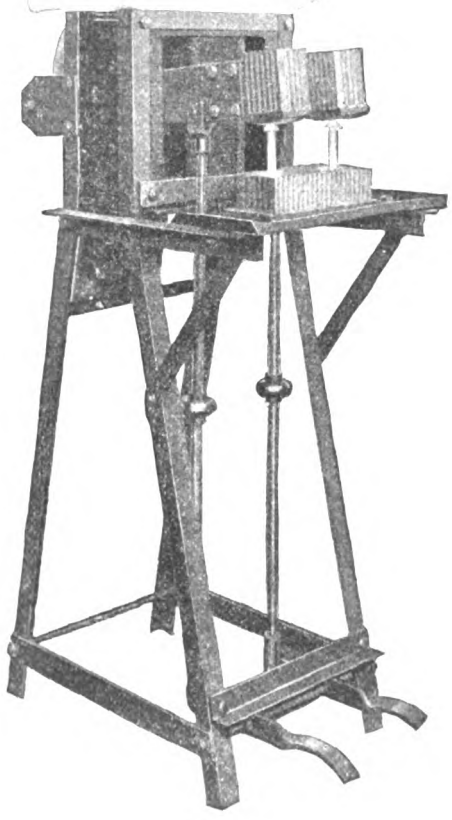
READING IRON COMPANY

READING PENNSYLVANIA

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

As electric power and light have become integral parts of industrial and domestic life, so will electric heat become an immediate member of that same family.





For Example

WE now offer for your approval a highly efficient—simple—portable

Electric Rivet Heater

which practically eliminates all of the objections found in present methods.

Briefly the advantages of this new device are as follows:

1. No time wasted in starting production.
2. Heats very rapidly—heated five hundred $\frac{1}{2}$ in. x $1\frac{1}{4}$ in. rivets in one hour.
3. Better regulation of heat—energy only used when heating rivets.
4. Clean—***no smoke*** or ***gas formed.***
5. Quality of heat better and minimum of scale formed. Rivet heats from inside out, giving more uniformity of heat and better upsetting conditions in shank.
6. Wastage of rivets reduced to a minimum.
7. Portable, self-contained, economical and easy to operate.

Any additional information on this subject will be gladly forwarded you upon request.

General Electric Company

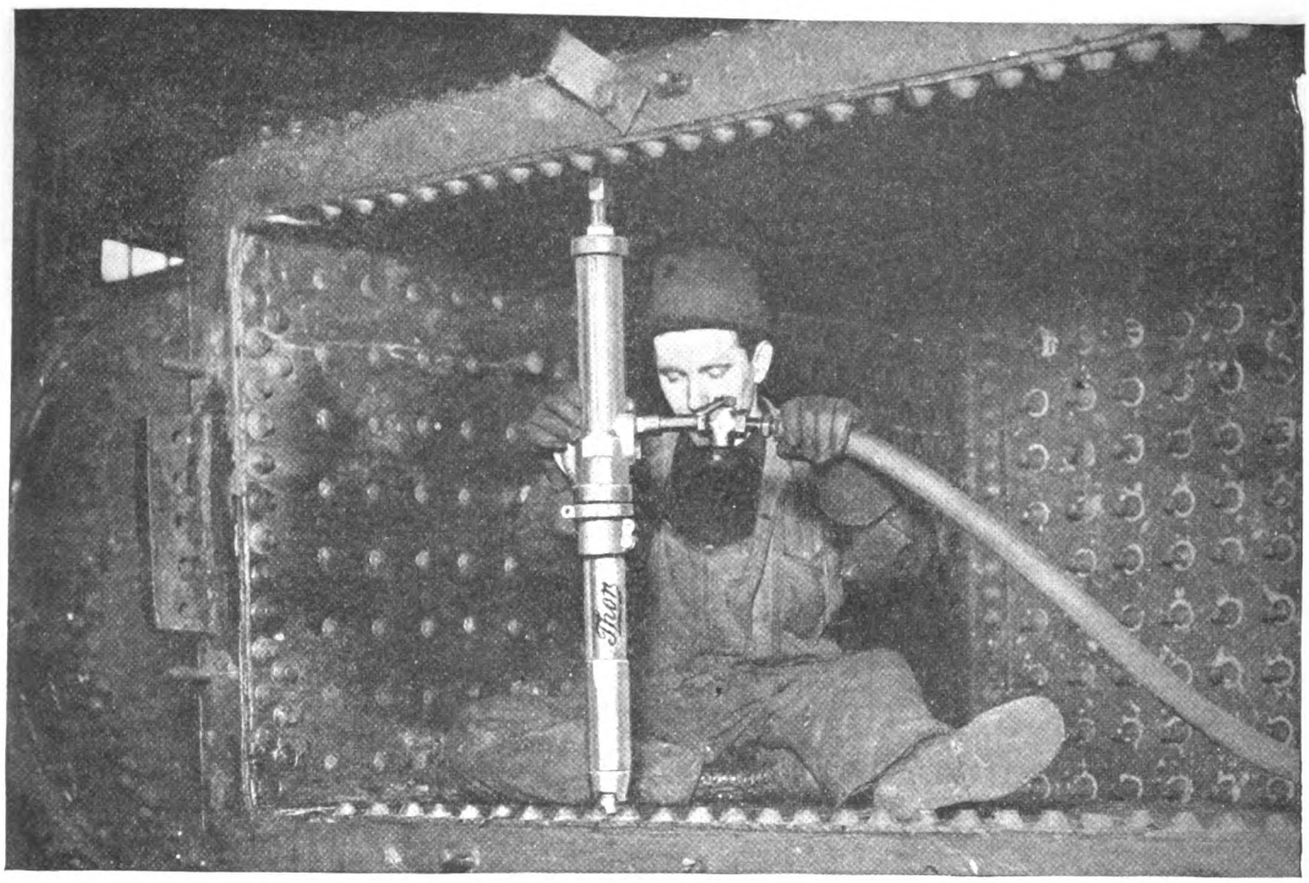
General Office Schenectady, N.Y.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Monterey Keeps Air Tools on the Job —It's Light, Strong and Oil-Resisting

The stout-bodied fabric of Goodyear Monterey Air Hose is steadfast assurance against kinks, cracks and bursts.

The high-grade, resilient rubber of Goodyear Monterey resists the rotting action of oil and provides the easy flexibility of a natural expansion and contraction under the recurrent pressures of the air.

Together—new, live rubber and long, tough fibre, firmly compacted in Goodyear special wrapped construction—they provide in Goodyear Monterey an air hose superior as to non-porosity, light in the hands of the workman, and successfully resistant to abrasion.

The wearing qualities of Goodyear Monterey, and its high operating efficiency, reduce its slightly higher first cost to an element of genuine economy.

Goodyear Monterey comes in 25- and 50-foot lengths.

THE GOODYEAR TIRE & RUBBER CO.
Offices Throughout the World

BELTING · PACKING · HOSE · VALVES

GOODYEAR

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Canadian Westinghouse Company Installed Thirty-Five Carloads of Equipment to Enable them to Store Safely, Measure Accurately,

distribute quickly, economically and with the least amount of waste, all of the oils and other liquids used in their mammoth plant.

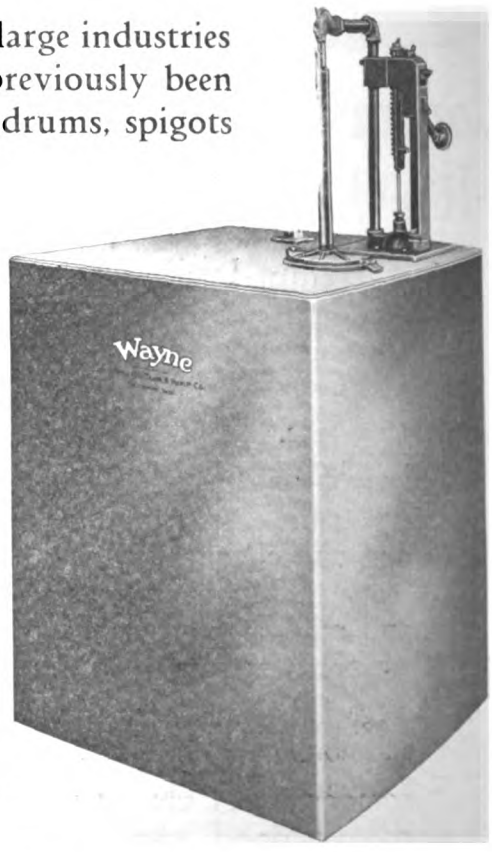
This order was placed after the most rigid investigation of modern oil and liquid storage systems as compared with the wooden barrel, steel drum and tin can measure system then in use.

Westinghouse engineers selected and have used since 1913,

Wayne

OIL STORAGE SYSTEMS

This order is but one of many received from large industries whose oil and liquid storage problem had previously been wastefully handled by wooden barrels, steel drums, spigots and tin can measures.



Practically every industry in the Marine Engineering Field uses oil and other liquids. You can effect a saving in your consumption and handling of these liquids.

The present price of oils and other essential liquids, together with the price of labor should prompt you to take advantage of our free consulting service. Our engineering staff is at your service and will make a thorough investigation of your problem without any semblance of obligation.

Send for our complete catalogue. Write us telling about your present storage methods and oil consumption. Ask for Bulletin 35 ME.

Wayne Oil Tank and Pump Company

589 CANAL STREET FORT WAYNE, INDIANA

Generated on 2024-09-12 08:17 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

LIGHTING FIXTURES
AND
WIRING APPLIANCES

STEAMTIGHT
WATERTIGHT
DAMP PROOF
FUME PROOF

FOR

STANDARD USES

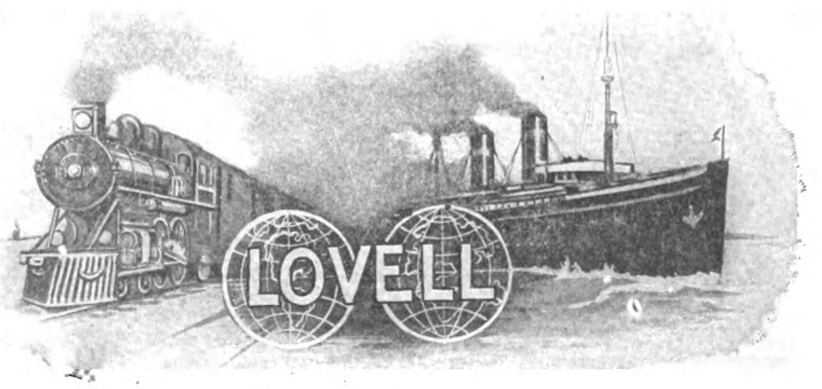
ALSO

SPECIAL
FIXTURES

TO

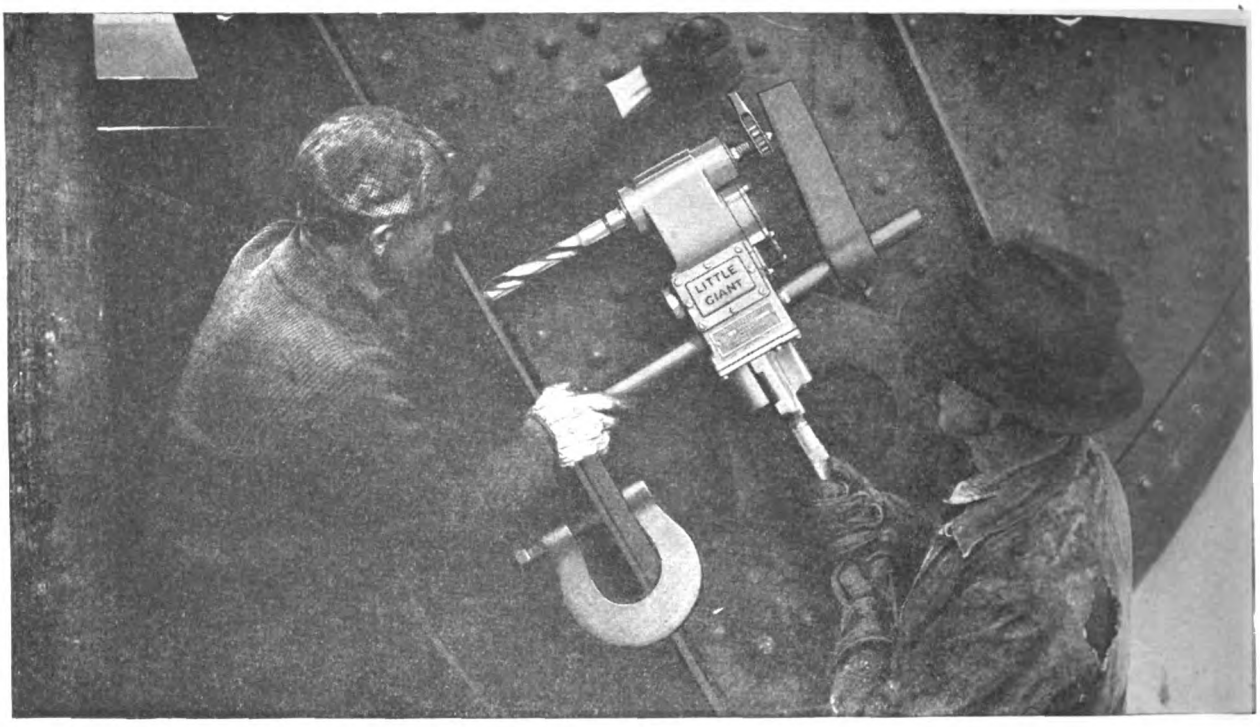
BLUE PRINT

CATALOGUE No. 500
ON REQUEST



ARLINGTON, N. J.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



LITTLE GIANT

"Close Quarters" Air Drills

FOR drilling, reaming or tapping in end walls, corners, etc., the "close quarters" drill has proved itself a real necessity. Indeed, this type of drill at first designed for special application, is becoming generally recognized as an easy-to-handle, powerful drilling machine for general purposes.

In the new line of Little Giant Close Quarters Drills the power of the motor is transmitted to the spindle through a compact train of gears, thus providing for steady, uninterrupted rotation. There are no ratchet levers to cause reduced drilling speed, vibration, uneven pull, or wear and tear on the machine itself. The rugged stub-tooth gears employed are of special alloy steel, practically indestructible. Highest grade roller bearings insure further durability and operating economy.

Faster drilling, even speed, vibrationless operation, and reduced operating cost — are some of the main features of this recent addition to the "Little Giant" family of portable drills. Several styles are available, both reversible and non-reversible types.

Ask for complete information

Chicago Pneumatic Tool Company

1024 Fisher Building, Chicago, Illinois

Branches all over the world

BIRMINGHAM BOSTON BUFFALO CINCINNATI CLEVELAND DETROIT ELDORADO EL PASO ERIE JOPLIN LOS ANGELES MILWAUKEE MINNEAPOLIS NEW YORK PHILADELPHIA PITTSBURGH PORTLAND RICHMOND SALT LAKE CITY SAN FRANCISCO SEATTLE ST. LOUIS TUCSON TULSA BOMBAY BRUSSELS FRASERBURGH HAVANA HONOLULU JOHANNESBURG CHRISTIANIA LONDON MILAN MONTREAL OSAKA PARIS SEOUL SYDNEY TOKYO TORONTO VANCOUVER WINNIPEG

BOYER PNEUMATIC HAMMERS · ROCK DRILLS COAL DRILLS

LITTLE GIANT PNEUMATIC TOOLS · LITTLE GIANT ELECTRIC TOOLS

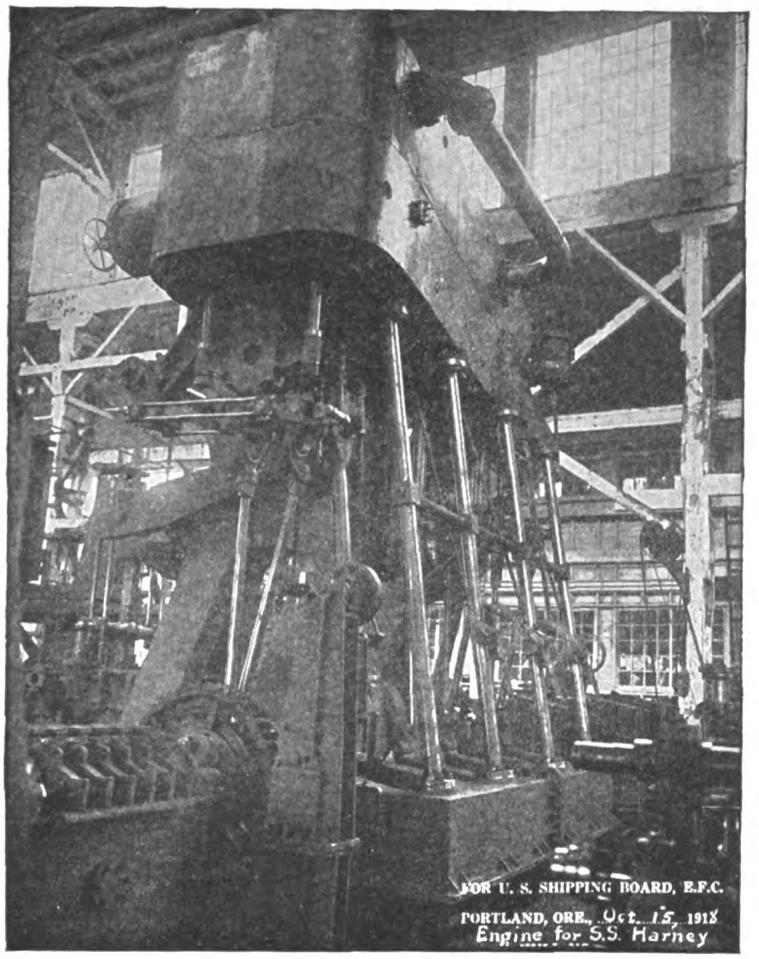
LITTLE *Pneumatic* GIANT *Tools*

CHICAGO PNEUMATIC AIR COMPRESSORS AND VACUUM PUMPS

GIANT FUEL OIL, GAS, GASOLINE AND STEAM ENGINES

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:14 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



ONE OF TWELVE 1,800 H. P. ENGINES BUILT FOR THE

EMERGENCY FLEET CORP'N.

BY

PACIFIC MARINE IRON WORKS

PORTLAND, ORE.

Engineers, Boilermakers, Machinists, Manufacturers of Ballin Water Tube Boilers

---

FOR SHIP REPAIRS

AVAILABLE FACILITIES INCLUDE

OUTFITTING DOCK capable of berthing 8 ships.

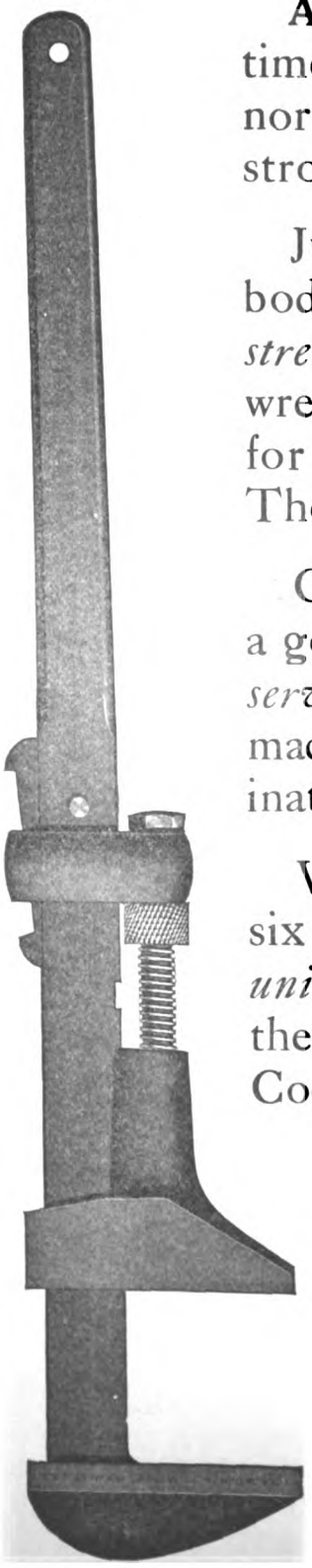
12,000 TON DRY DOCK with all necessary equipment.

COMPLETE MACHINE AND BOILER SHOP EQUIPMENT for building or repairing Marine Engines and Boilers of any size.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Importance Of a Strong Constitution

3 Sizes
28"-36"
and 48"



A man who is sick most of the time cannot accomplish much—nor a wrench, *both* must have a strong constitution.

Just as each part of the human body must contribute its share of *strength*, so must each part of a wrench *unite* with the other parts for this same accomplishment. There must be no *weak parts*.

Coes "Steel-Handle" Wrench is a good example of how *strong* and *serviceable* a screw wrench can be made when *useless* parts are eliminated.

With a constitution made up of six solid, simple whole parts, all *united* by the strong Coes method, there isn't a sign of weakness in a Coes Steel Wrench anywhere.

COES
"Steel-Handle"
WRENCH
7 Sizes
6" to 21"

These two models are especially made for trying service, in moisture, (hot or cold) and for heavy duty.

Coes Wrench Company

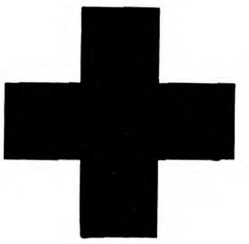
Established 1841 in
Worcester, Mass.

J. C. McCARTY & CO., 29 Murray Street, New York
J. H. GRAHAM & CO., 113 Chambers Street, New York
FENWICK FRERES, 8 Rue de Rocroy, Paris, France
For Continental Europe

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:23 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SYMBOLS *of* SERVICE



Never before in the history of the Red Cross was its glorified service so greatly appreciated by mankind as it was during the world war. True, the Red Cross has always in times of peace and war followed floods, fires and other disasters in order to alleviate human suffering. Yet the world never fully comprehended until the war came that the Red Cross is a revelation of service idealized.

The war showed, too, the value of service commercialized. Such service can also be earnest and far reaching and beneficial to mankind. The Government demanded in spite of need for haste that materials be true to specifications; yet real worth remained to be proven by the test of time. Those firms which, during the war, gave such genuine service, have therein learned the lesson of service for all time to come.

The house of the Marine Decking & Supply Company is founded on the principle that the service of its products is the only commodity that it has to offer for sale. The successful service that these products have given in the past proves that this principle is sound for the future.

LITOSILO DECKING

MADESCO BITUMINOUS SOLUTION & ENAMEL

MADESCO WOOD AND STEEL BLOCKS

MADESCO HYDRAULIC ASH EJECTORS

MARINE DECKING & SUPPLY CO. PHILADELPHIA, PA. MADESCO PRODUCTS

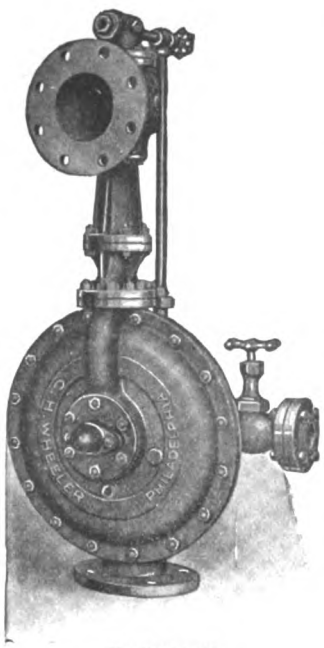
NEW YORK OFFICE
21 PARK ROW

MAIN OFFICE
1011 CHESTNUT ST.
PHILADELPHIA

CLEVELAND OFFICE
GEO. RACKLE & SONS CO.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

We Specialize in the Design and Construction of Surface and Jet Condensers.



Radojet Ejector Air Pumps

Over 4,000,000 H. P. sold.

Three years successful operation.

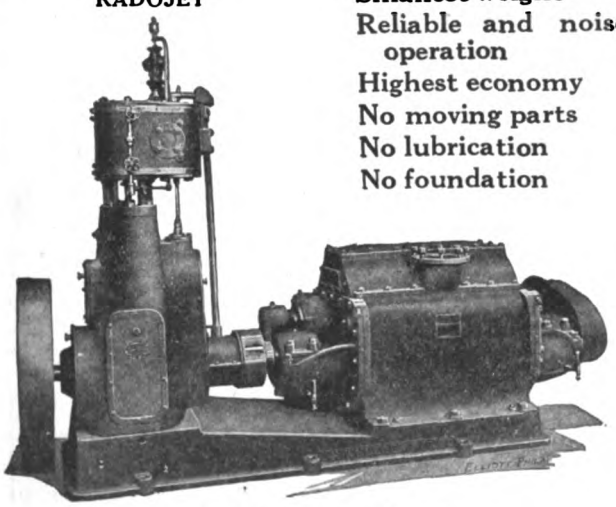
28.8 to 29.3" vacuum when operating under full load conditions.

RADOJET AIR PUMPS

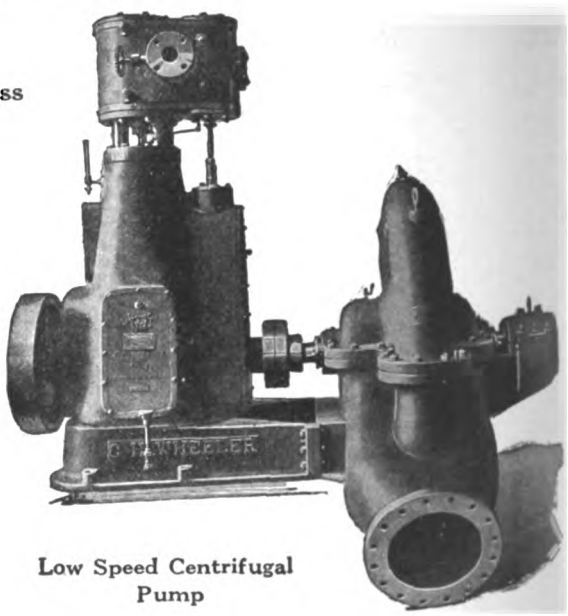
Fulfill all the requirements for marine service.

Smallest weight
Reliable and noiseless operation
Highest economy
No moving parts
No lubrication
No foundation

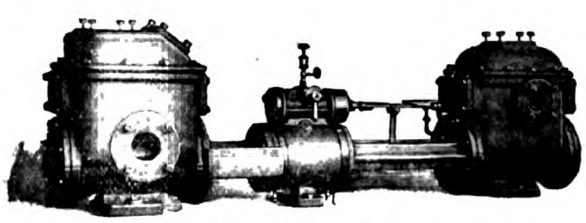
RADOJET



ROTREX Vacuum Pump



Low Speed Centrifugal Pump



Combined Air and Circulating Pump

C. H. WHEELER MANUFACTURING COMPANY

Main Office and Works: PHILADELPHIA, PA.

Branch Offices: New York, Boston, Chicago, Pittsburgh, San Francisco, Seattle, Charlotte, New Orleans

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

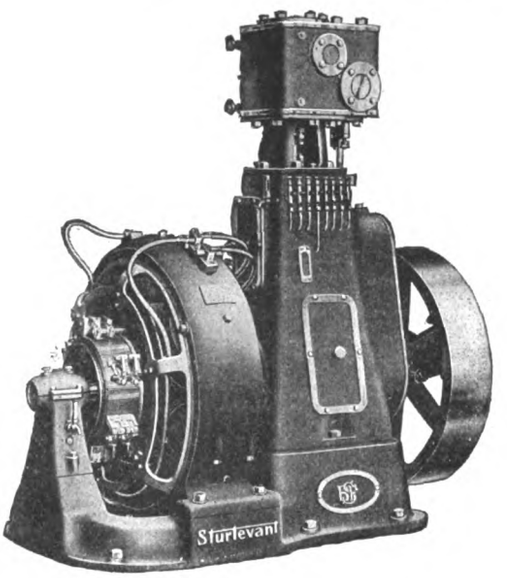
Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Sturtevant

REG. U.S. PAT. OFF.

Electric Generating Sets



Designed and Built To U.S. Navy Specifications!

—which fact forcibly indorses their efficiency, design, dependability, and quality of construction. Have close regulation and are suitable for all light and power purposes. Specially adapted for isolated power plants, and as auxiliaries in large plants, as well as on shipboard. They are compact, self-contained units, consisting of a Sturtevant steam engine direct connected to a conservatively rated Sturtevant electric generator. Are made with automatic lubricating systems, either gravity or forced feed. All reciprocating parts of the engine are entirely enclosed within the engine frame, which is provided with oil- and dust-proof covers. All parts are readily accessible by removing these covers. Write us for Bulletin No. 23911 which details the merits, design, and construction of Sturtevant Electric Generating Sets.

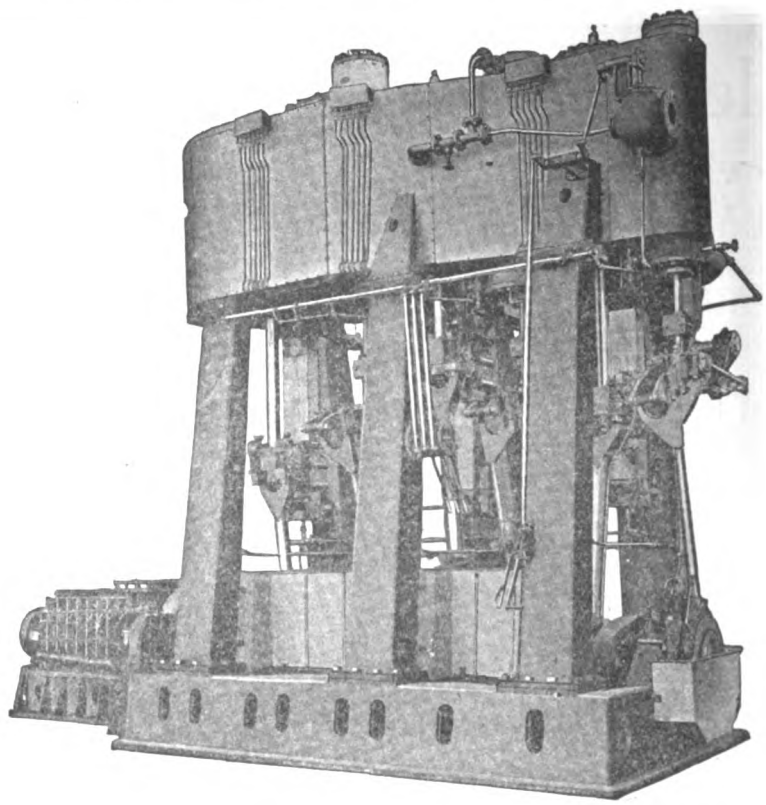
B. F. STURTEVANT CO.

HYDE PARK, MASS., AND ALL PRINCIPAL CITIES

Sturtevant
PUTS AIR TO WORK

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TRAYLOR



Traylor's exceptional manufacturing and shipping facilities insure Quickest deliveries of

Simple, Compound and Triple Expansion

Marine Engines, Boilers, Condensers, Pumps,

and

Ballast Tanks

for Tug-Boats and Ships

Traylor Engineering & Manufacturing Co.

Main Offices and Plant: Allentown, Pa.

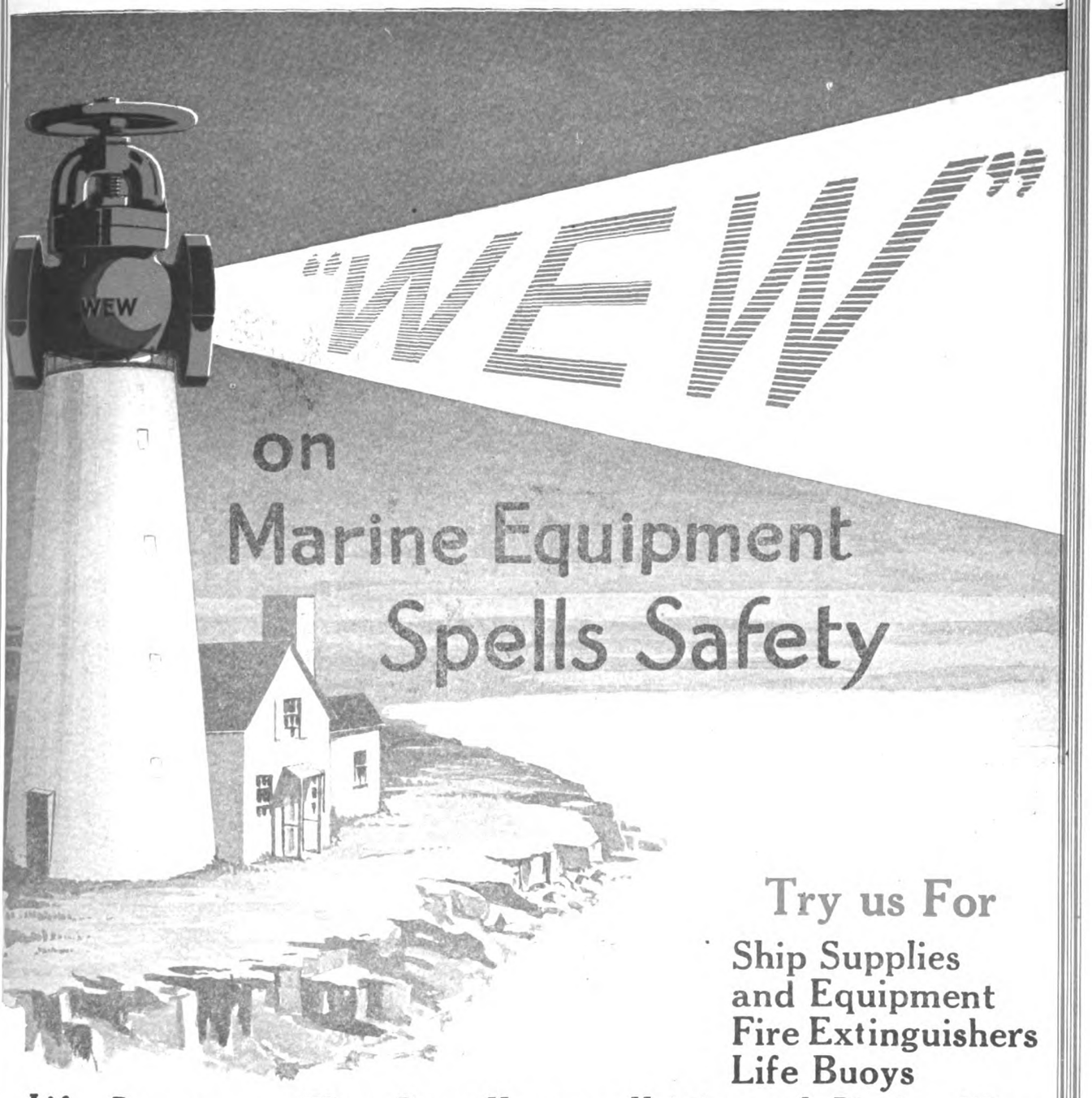
New York	Pittsburgh	Chicago	Los Angeles	Spokane
30 Church Street	211 Fulton Bldg.	1414 Fisher Bldg.	Citizens Bank Bldg.	Mohawk Block

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:27 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



"WEW"

on

Marine Equipment

Spells Safety

Try us For

Ship Supplies
and Equipment
Fire Extinguishers
Life Buoys

Life Preservers, Wire Rope Hawsers, Hoisting and Rigging Wires

We carry largest stock of ship supplies of all kinds

Send for Our illustrated catalog

We carry full line of "WEW" Bronze and Iron Body Valves—The "WEW" is the heaviest and best Marine Valve Made

Immediate Deliveries made by Our Own Motor Trucks

WILLIAM E. WILLIAMS

62 FRONT STREET, NEW YORK

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

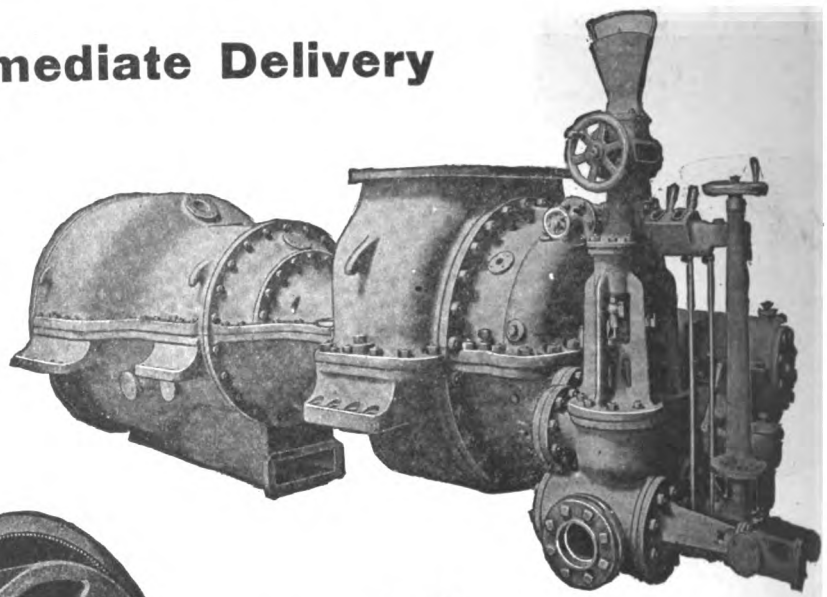
Generated on 2024-09-12 09:00 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

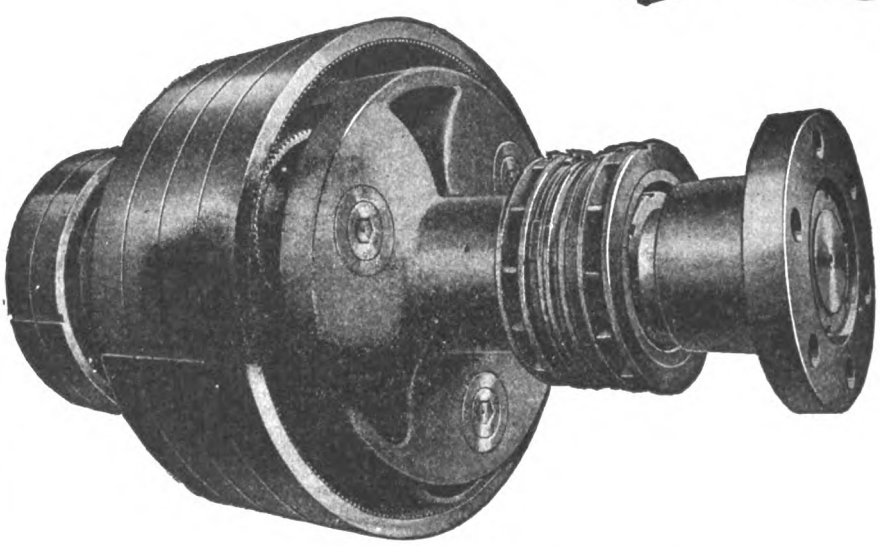
Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

Ready For Immediate Delivery

1500 S. H. P. Marine Turbine and Direct Connected Double Reduction Turbo Gear Speed Reduction 4000 to 90 R.P.M.





The reduction gear members view from low speed end.

TURBOGEAR

FAST PATENTS

Offers the following advantages:

STRAIGHT LINE DRIVE
COMPACTNESS
ECONOMY
NOISELESS
NO VIBRATION

THE POOLE ENGINEERING AND MACHINE COMPANY

WORKS, BALTIMORE, MD., U. S. A.

GENERAL SALES OFFICE: 50 CHURCH ST., NEW YORK

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

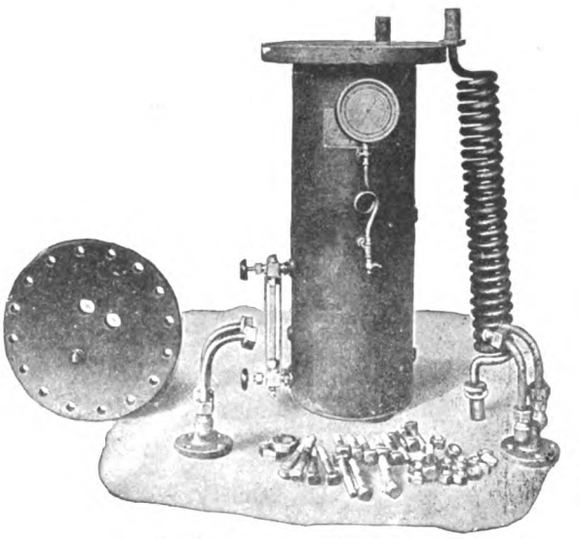
Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

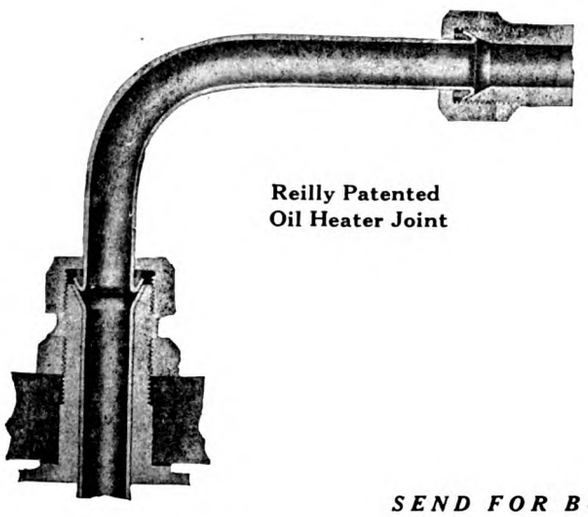
4,030,000 Boiler Horse Power

Served by Fuel Oil Heaters of our Manufacture

This refers to units in actual operation or now on order and being built in our works. For use in U. S. Navy, Merchant Marine, and Stationary Power Plants.



Reilly Fuel Oil Heater



Reilly Patented Oil Heater Joint

ADVANTAGES

1. No internal oil joints—no possibility of contamination of high pressure steam through leaky oil joints.
2. Condensed high pressure steam used as the heating medium can be returned to boiler without danger of oil contamination.
3. Compact—small space occupied.
4. External joint feature—our exclusive patent.
5. All coils standard—Interchangeable construction.

SEND FOR BULLETIN 250

THE GRISCOM-RUSSELL CO.

2124 West Street Building, NEW YORK

PACIFIC COAST AGENTS

CHAS. C. MOORE & COMPANY ENGINEERS, 718 Sheldon Buildng SAN FRANCISCO, CAL.

Generated on 2024-09-12 08:45 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Even for brand new wireless problems, the flexible new 3-way Marconi Plan provides ready-made solutions.

FOR now you can rent as of old, you can buy outright, or you can contract with us for Marconi Service. This third possibility is the one that appeals to owners whose Marconi-equipped vessels have been returned to them by the government.

In its three phases, the new Marconi Plan is at once the most complete and the most flexible solution of today's pressing problems in wireless operation and maintenance. Under any of these arrangements, you get all the value of Marconi development in the apparatus; and because of our special experience and world-wide organization, we have been able to design the service to meet every routine or special need, in home or foreign waters.

And remember—this is ready and in operation NOW. Why make costly experiments when you can, at low cost shift the entire burden of operation on Marconi?

Ask our nearest office for details.

MARCONI WIRELESS TELEGRAPH COMPANY OF AMERICA

Woolworth Building, New York

Branch Offices:

Chicago Boston Philadelphia Baltimore Cleveland
New Orleans Seattle San Pedro, Cal. Portland, Ore. Norfolk, Va.
San Francisco Galveston, Texas Savannah, Ga. Honolulu, H. T.

WORLD-WIDE WIRELESS

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

EXAMINE THE OPERATION OF THESE VESSELS

WHEN THEY ARRIVE AT YOUR PORT

NAME	GROSS TONS
Santino	3800
Mt. Rainier	3800
Wergeland	3800
General Pershing	3800
Balestrand	3800
Korsnaes	3800
Hjeltenaes	3800
Marie De Ronde	3800
Pisagua	4500

All 3800 ton ships listed above are equipped with Twin 350 S. H. P.
The 4500 with Twin 600 S. H. P.

EQUIPPED WITH

SUMNER HEAVY OIL ENGINES

SEND FOR CATALOG

H. W. SUMNER COMPANY

[A CO-PARTNERSHIP]

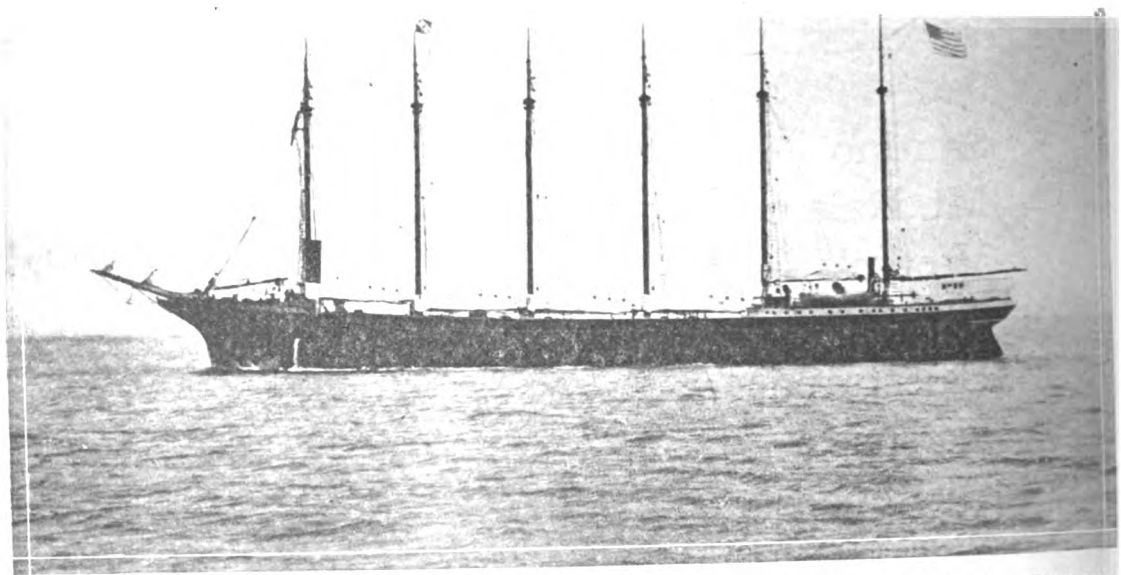
L. C. SMITH BUILDING, SEATTLE, U. S. A.

HENRY W. SUMNER
ALBERT E. PARKER

MARINE OCEAN-GOING
HEAVY OIL ENGINES

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

BOLINDERS



MOTORSHIP "KATHERINE"—Philippine Vegetable Oil Company's latest tanker. 286 ft. 9 in. x 43 ft. 5 in. x 24 ft. 1 in. Gross Weight 2196 Tons. Equipped with two 320 B. H. P. Type "MII" Bolinder Fuel Oil Engines. Speed eight knots.

Built to be the finest of its type—this ship is Bolinder Equipped.

MOTHORSHIP "Katherine," the latest addition to the fleet of tankers owned by the Philippine Vegetable Oil Company, has gained by her recent trial trips, the most enthusiastic praise of naval experts.

Originally a four masted, square rigged, British built, iron sailing ship, she has been converted into a six masted, bald headed auxiliary schooner with total cargo capacity of 3,000 tons on 22 ft. draft. The substantial workmanship throughout, the most modern and efficient installations, together with her splendid showing on her trial trip, has earned for this ship the highest classification in Lloyds.

The Efficiency and Economy afforded the Philippine Vegetable Oil Company by BOLINDER ENGINES is likewise at your command.

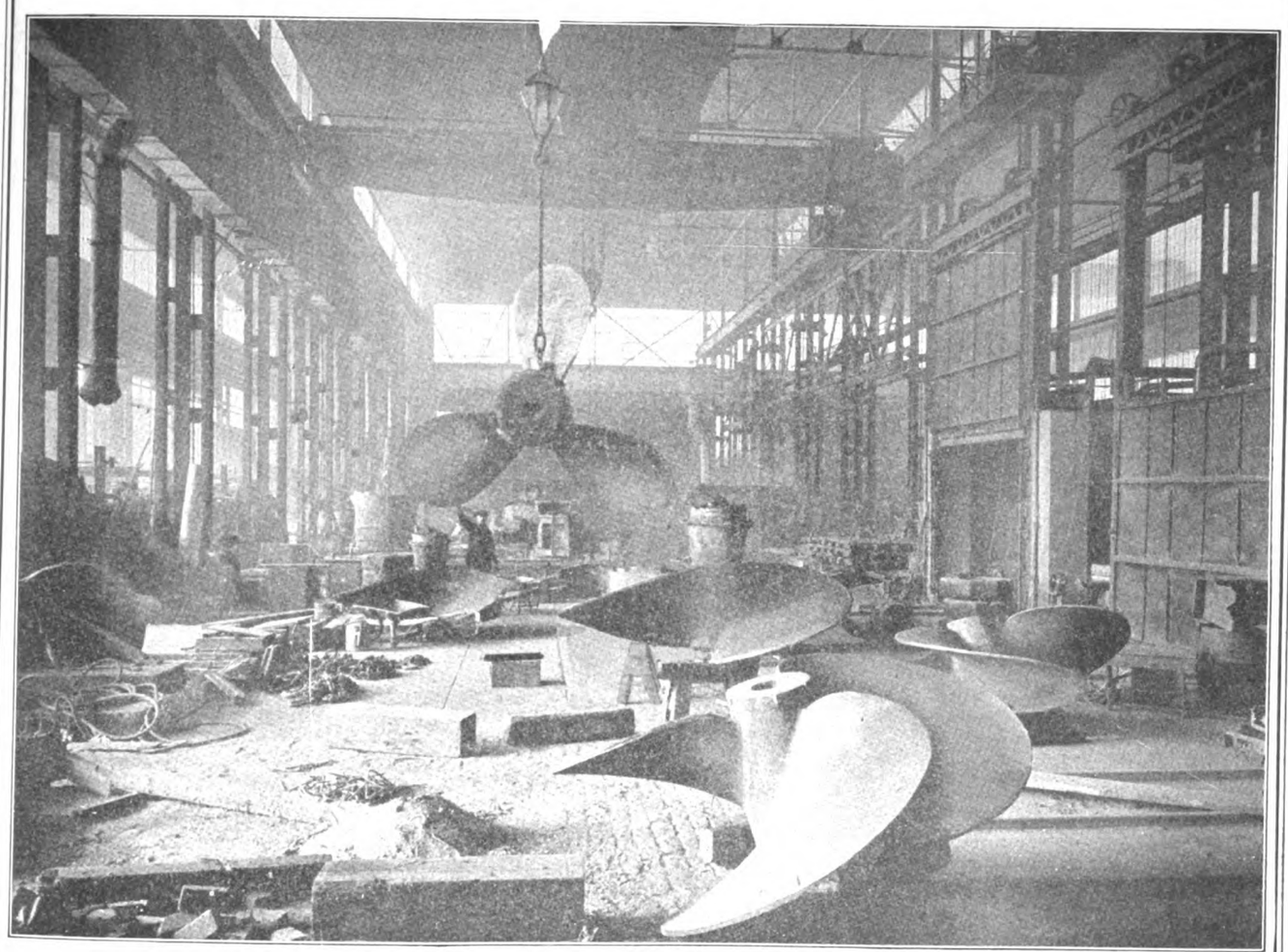
BOLINDERS COMPANY, 30 Church Street, NEW YORK CITY

Pacific Coast Representatives—HENRY LUND & COMPANY, Marine Bldg., San Francisco, Cal.

Copyright 1919, by Rex W. Wadman, Inc.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

CRAMP



Center Bay of Cramp's Propeller Foundry

Showing in the foreground four propellers for destroyers, two with sinkheads and two with sinkheads cut off. Also showing at the extreme left one destroyer propeller at the saw, sinkhead being cut off. The large propeller held by the traveling crane is 16 feet 6 inches diameter, weighs 25,000 lbs. and was made for Bethlehem Shipbuilding Corporation, Fore River Plant.

The ladle in the left background holds 75,000 lbs. of PARSON'S MANGANESE BRONZE, of which metal the propellers are cast. Over 800 of these wheels for 400 transports, cargo and war vessels were turned out by the Cramp Company during the war. The Foundry cast 1,000,000 lbs. marine bronze castings per month as part of its war work.

THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING COMPANY

PHILADELPHIA, PA.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

STANDARD

For Forty Years

"This Stamp of Quality"
on every
Twist Drill, Reamer,
Milling Cutter, Tap,
Chuck and Special
Tool,
made by

THE STANDARD TOOL CO
CLEVELAND, U.S.A.

New York Store	94 Reade St.
Chicago Store	552 W. Washington Blvd.
Great Britain	Burton Griffiths & Co., Ltd., London
France	Burton Files, Paris
Switzerland	J. Lambercier & Cie, Geneva
Denmark	Nienstaed & Co., Copenhagen
Japan	The F. W. Horne Co., Tokyo

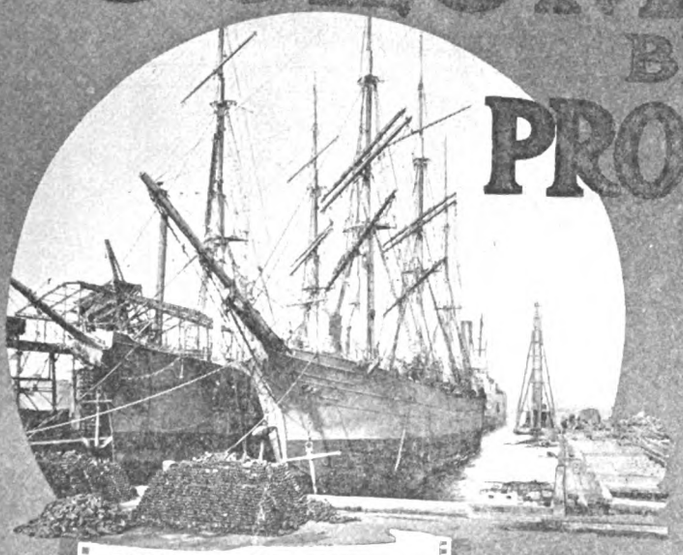
When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:12 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

COLUMBIAN BRONZE PROPELLERS



Photograph by courtesy of Morse Dry Dock & Repair Co.

"Spica" illustrated above is a typical example of the type of boat now using Columbian Bronze Propellers in place of cast iron wheels.

Built in 1877 by Harland & Wolff as a steel Sailing Schooner. Converted in 1919 to a Motorship by the Morse Dry Dock & Repair Company and equipped with the Columbian Bronze Propeller illustrated in the right hand corner herewith.

"Spica" is 230 ft. x 36 ft. x 22 ft—1332 tons, now equipt as a motorship with a bronze propeller is a mighty efficient ship.

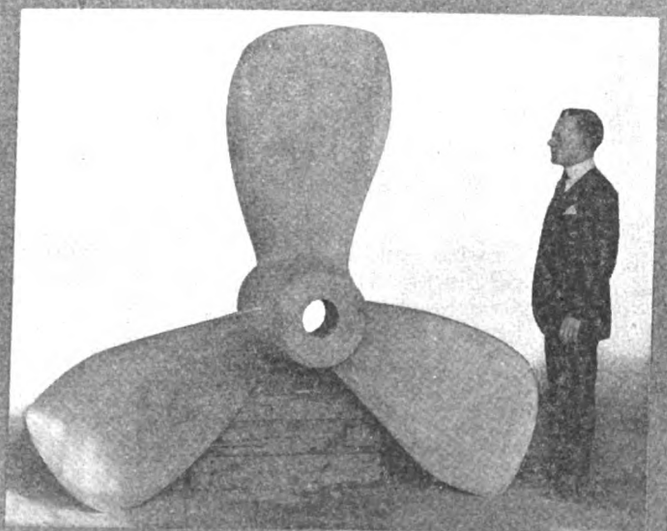
Your ships will be better ships, more dependable ships, more efficient ships if they are equipt with Columbian Bronze Propellers.

WE manufacture complete Steamship and Motor Ship Propeller Equipment including propellers: intermediate and tail shafts in bronze and steel up to 10" in diameter, in bronze up to 5"; shaft couplings; stern tubes; stern bearings, babbitted or lignum vitae lined—all to Lloyd's specifications where required, or to your specifications otherwise.

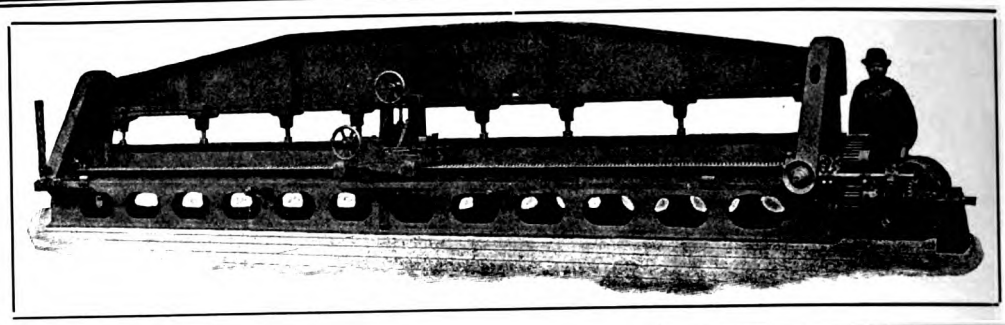
Write for the NEW Columbian Catalog —it's well worth having and it's FREE.

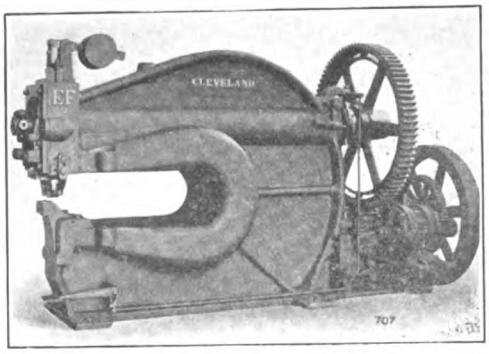
COLUMBIAN BRONZE CORPORATION

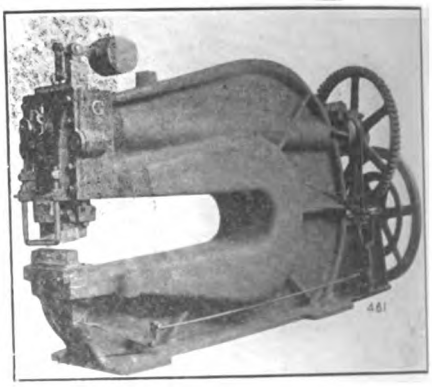
Executive Office: 50 Church Street, New York City



Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN







CLEVELAND SOLID STEEL

Whether the machine is a Plate Planer with a Bethlehem "I" beam for a clamping girder or a Punch or Shear with the SOLID semi-steel frame---every machine that bears the name of *"Cleveland"* is substantially constructed for continuous satisfactory service.

Cleveland Engineers carefully study the purpose for which a machine is designed and make ample provisions for stresses and shocks to which machines used in the fabrication of iron and steel are subjected.

Our thirty years' experience as manufacturers is at your disposal whenever you contemplate the purchase of any of the following:

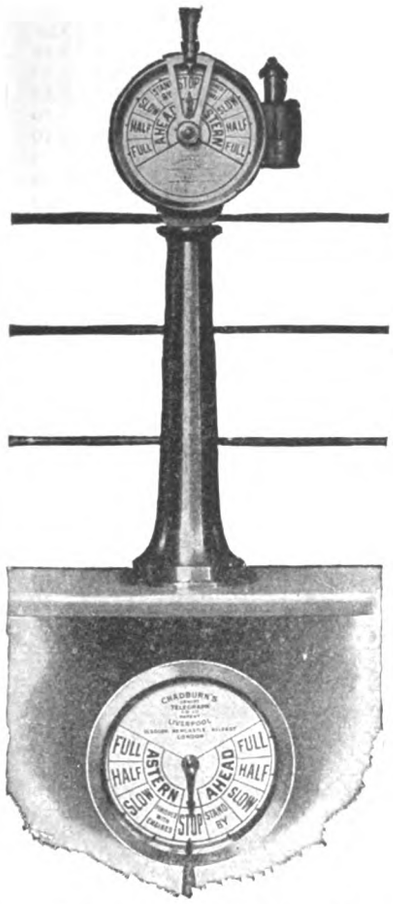
Punches and Shears
Bending Rolls
Straightening Rolls
Rotary Planers
Straightening Machines
Multiple punches
Gate Shears
Radial Drills
Bar Shears
Plate Planers
Angle Shears

THE CLEVELAND PUNCH & SHEAR WORKS CO.
Main Office & Works . CLEVELAND, OHIO
PITTSBURGH - CHICAGO - PHILADELPHIA - NEW YORK

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

CHADBURN FOR SAFETY



Engine-Room Telegraph
Single Screw Equipment

CHADBURNS of England were the original inventors and patentees of all forms of ship's telegraphs, both Naval and Mercantile.

CHADBURN (SHIP) TELEGRAPH COMPANY OF AMERICA, Inc., is an American company formed to manufacture the whole of the Chadburn specialties for the United States.

The American company is producing telegraphs of every description for the fast growing Mercantile Marine of America, and their highly equipped factory at Troy, N. Y., is in a position to give expert advice regarding the most suitable forms of equipment required.

In addition, the American company is now manufacturing high-class Binoculars, Compasses, Sextants, Sounding Machines and Engine Counters.

Up to date over 12,000 vessels of the Mercantile Marine of all nations are carrying the Chadburn specialties exclusively.

CHABDBURN (SHIP) TELEGRAPH CO. of AMERICA

INCORPORATED

TROY, NEW YORK

Factries also at—Montreal, Canada, and Liverpool, England

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ROLL CALL—1919

PURCHASER	No. of Cranes	Size—Tons
Allis-Chalmers Co	240	1 to 75
Bethlehem Steel Co	209	1 to 75
American Brass Co	168	¼ to 20
Standard Steel Works Co	96	5 to 40
Baldwin Locomotive Works	94	5 to 150
The Midvale Steel Co	82	½ to 150
U. S. Government	71	1 to 25
N. Y. Ship Building Co	68	5 to 60
Haskell Barker Car Co	66	1 to 12
Crucible Steel Co. of America	52	2 to 25
American Bridge Co	49	2 to 30
International Harvester Co	48	2 to 10
American Sheet & Tin Plate Company	47	2 to 50
American Clay Machinery Co	44	3 to 20
American Car & Foundry Co	43	1 to 10
Ford Motor Company	37	½ to 30
New Orleans Board of Port Commissioners	37	2 to 15
Worthington Pump & Machinery Corp	36	1 to 10
Pusey & Jones Co	35	3 to 30
The Falk Co	34	¼ to 40
Pennsylvania R. R. Co	34	1 to 50
American Locomotive Co	32	3 to 50
J. I. Case Threshing Machine Co	32	2 to 20
Wm. Cramp & Sons S. & E. B. Co	33	5 to 45
Ingersoll Rand Co	32	½ to 30
Chicago & Northwestern R. R.	31	2 to 75
McClintic Marshall Cons. Co	30	5 to 25
Pacific Lumber Co	30	3 to 5
Jos. T. Ryerson & Son	29	2 to 20
Illinois Steel Co	28	1 to 40
Baltimore Copper Smelt. & Roll. Co	27	3 to 15
Sun Shipbuilding Co	27	5 to 100
Fairbanks, Morse & Co	25	2 to 20
Westinghouse Mach. Co	25	3 to 20
Bettendorf Axle Co	24	2 to 10
Chile Exploration Company	24	2 to 30
The East Jersey Pipe Co	24	3 to 15
Milwaukee Elec. Ry. & Lt. Company	24	¼ to 125
The National Malleable Casting Co	24	1½ to 50
Chickasaw Shipbuilding Co	23	3 to 5
Reading Iron Co	23	3 to 10
Dodge Bros	22	1 to 10
Wheeling Steel & Iron Co	22	2 to 10
The Bucyrus Co	21	3 to 25
Rome Brass & Copper Co	21	½ to 2½
Tennessee Coal, Iron & R. R. Co	21	3 to 50
Studebaker Corporation	20	2 to 10
Calumet & Hecla Mining Co	20	1 to 25
Nordberg Mfg. Co	20	2 to 40
Phillips Sheet & Tin Plate Co	20	1 to 30
Sullivan Machinery Co	19	3 to 40
The Vilter Mfg. Co	19	2 to 20
American Smelting & Refining Company	18	3 to 25
Bullard Machine Tool Company	18	3 to 20
Lukens Iron & Steel Co	18	1½ to 20

PURCHASER	No. of Cranes	Size—Tons
National Carbon Co	18	3 to 10
Oil Well Supply Co	17	2 to 15
Geo. H. Smith Steel Casting Co	17	½ to 10
Superior Steel Co	17	3 to 25
Federal Shipbuilding Co	16	2 to 5
Fulton Iron Works	16	4 to 30
Lorain Steel Co	16	5 to 30
Merchants Shipbuilding Co	16	3 to 15
Crane Company	15	1½ to 3
La Belle Iron Works Co	15	5 to 35
Minneapolis Steel & Mach. Co	15	5 to 30
National Brake & Elec. Co	15	3 to 20
Tremont Lumber Co	15	3 to 15
Goodman Mfg. Co	14	3 to 15
Gould Coupler Co	14	3 to 30
Texas Company	14	2 to 10
Follansbee Bros. Co	13	5 to 25
Milton Manufacturing Co	13	2 to 6
McConway & Torley Co	13	5 to 25
New Jersey Zinc Co	13	1½ to 40
Northwest Steel Co	13	5 to 15
Whitaker-Glessner Co	13	2 to 50
The Filer & Stowell Co	13	5 to 30
American Steel & Wire Co	12	½ to 30
Ball Engine Co	12	1½ to 25
Platt Iron Works	12	5 to 20
Lewis F. Shoemaker Co	12	4 to 10
Simmons Co	12	2 to 10
Dravo Contracting Co	11	3 to 15
John Eichleay Jr. & Co	11	2 to 20
Edward Ford Plate Glass Co	11	3 to 25
Heppenstall Forge & Knife Co	11	3 to 10
Mesta Machine Co	11	3 to 75
Newport Mining Company	11	1 to 20
Advance Rumely Co	11	5 to 20
Henry Vogt Machine Co	11	5 to 25
Belmont Iron Works	11	5 to 15
Jeffrey Manufacturing Co	11	3 to 25
Baltic Ship Building & Eng. Wks	10	3 to 35
Carnegie Steel Co	10	1 to 10
Firestone Tire & Rubber Co	10	2 to 15
Gisholt Mach. Co	10	5 to 10
Jones & Laughlin Steel Co	10	4 to 40
New York Edison Co	10	10 to 50
Norton Grinding Co	10	1 to 10
S. Morgan-Smith Co	10	5 to 15
Western Drydock & Shipbuilding Co	10	3 to 120
Camden Forge Co	9	10 to 25
American Shipbuilding Co	8	10 to 150
Fore River Shipbuilding Co	8	7½ to 50
Busch Sulzer Bros. Diesel Eng. Co	8	5 to 40
Standifer Construction Co	8	3 to 25
Lackawanna Bridge Co	8	5 to 20
Newport News Shipbuilding & D. D. Co	7	20 to 50
Oregon Railroad & Navigation Co	4	15 to 120

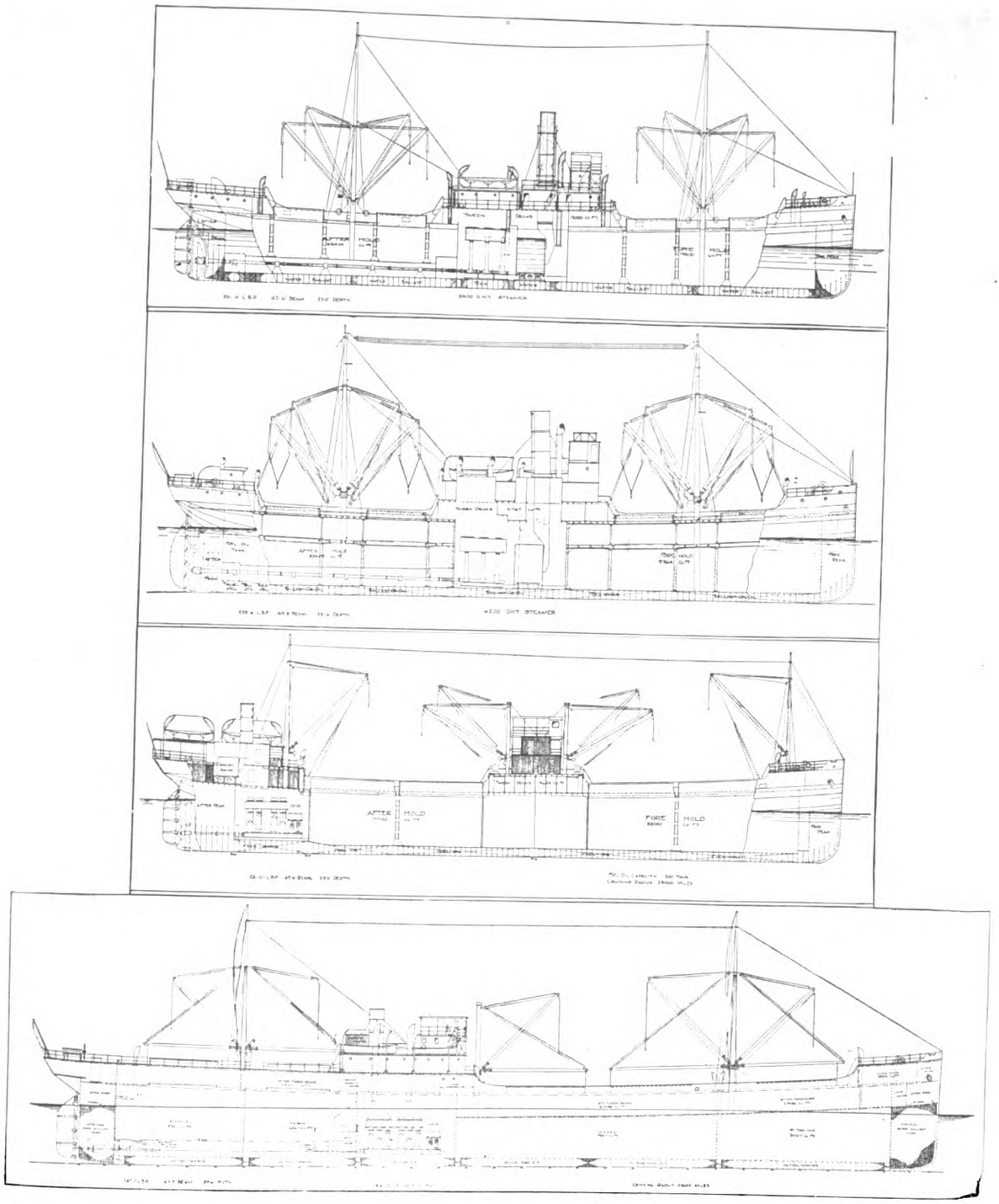
Built by **6000 CRANES IN USE**

PAWLING & HARNISCHFEGER COMPANY, *Milwaukee*

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

MANITOWOC SHIPBUILDING COMPANY



Standard ocean going steam and motor ships. Designers and builders of steel vessels, marine engines, boilers, ship auxiliary machinery, etc.

MANITOWOC, WISCONSIN

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Dunn Stockless Anchors

American Steel Foundries

CHICAGO NEW YORK

Used on all classes of vessels from the largest battleships to small fishing smack—and in every instance, even under the most severe conditions, they have made good.

Dunn Stockless Anchors have unfailing holding power; eliminate all chance of fouling; are by far the easiest to operate.

We would like to send you complete details.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Ropeconomy

TALK No. 6

You may pay a little more per pound for Whitlock ALL-Manila Rope, because **we** pay more per pound for the fibre we use. **But**—

Your cost per **foot** is little, if any, higher,—often it is lower; and your work is done more cheaply because Whitlock ALL-Manila Rope has greater strength and **life.**

Careful buyers, mindful of ultimate "Ropeconomy," specify—

WHITLOCK

"The Utmost in Rope Value"

DEPARTMENT M

WHITLOCK CORDAGE COMPANY

46 South Street, New York

Factory and Warehouses:
JERSEY CITY
N. J.

Branches:
CHICAGO, BOSTON, HOUSTON
and KANSAS CITY

Copyright, 1919, by Whitlock Cordage Company

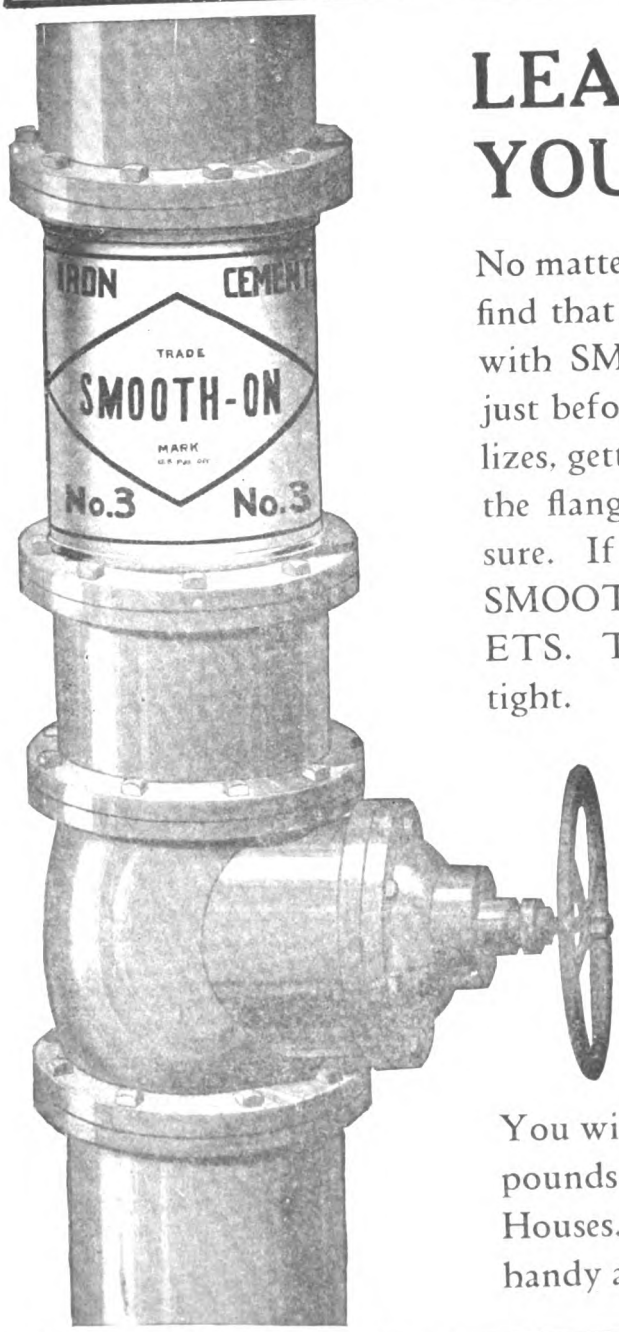
When writing to advertisers, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

SMOOTH-ON ELASTIC CEMENT No3



LEAK PROOF YOUR FLANGE JOINTS

No matter what kind of gaskets you are using you will find that they can be improved by coating both sides with SMOOTH-ON ELASTIC CEMENT No. 3 just before making the joint. It expands as it metallizes, getting right down into the little irregularities of the flange face, and making a tight joint absolutely sure. If you want the maximum in gasket value use SMOOTH-ON CORRUGATED IRON GASKETS. The line is yet to be found that they can't hold tight.

For Low Pressure Steam Lines

The highest priced packings cannot give better service than gaskets cut from manila paper and coated with SMOOTH-ON ELASTIC CEMENT No. 3. Try it. Use SMOOTH-ON ELASTIC CEMENT No. 3 for screw thread joints too. You will find it far better than ordinary jointing compounds. Smooth-On Cements are sold by Supply Houses. The *five pound* cans are recommended as a handy and economical size.

We have two valuable books for Free Distribution. Send Postal or use Coupon. Smooth-On Instruction Book No. 16 with 144 pages of Power Plant data. Smooth-On Instruction Book No. 7 should be in the hands of every man with "dusting" and "damp-roofing" problems to solve.

SMOOTH-ON MFG. CO.
Established 1895
570-574 COMMUNIPAW AVENUE
JERSEY CITY, N.J., U.S.A.
Smooth-On Specialties are Sold by Supply Houses.

Send the Coupon Today

Smooth-On Mfg. Co., Jersey City, N. J.
Gentlemen
( ) Smooth-On Instruction Book No. 7.
( ) Smooth-On Instruction Book No. 16.
Name .....
Address .....

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

LUKENS

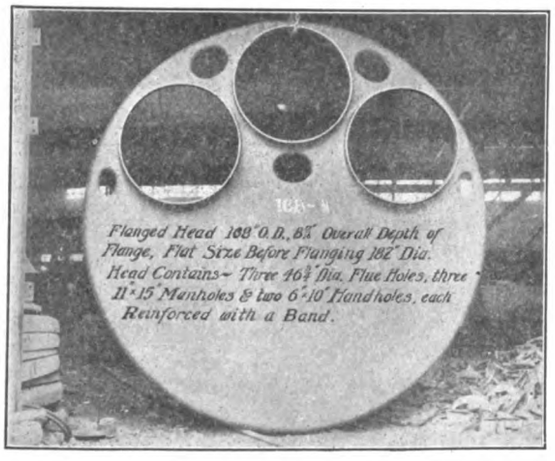
SAVE THE PIECES

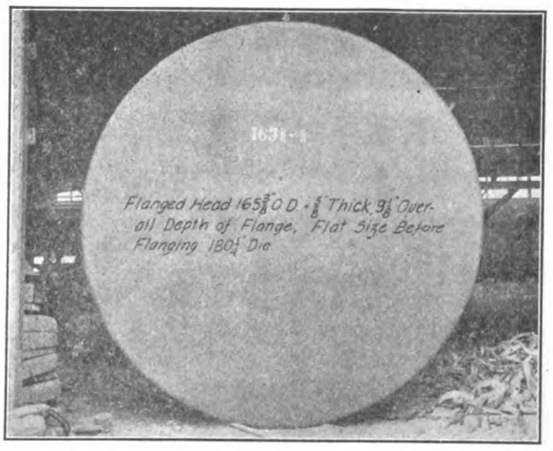
with

The World's Largest Plate Mill

Since we started up our 204 inch mill you can build large Marine Boiler Heads in One Piece, also use one plate instead of two or more in Boiler Construction, thus avoiding unnecessary seams and rivets.

Design Boiler Heads in One Piece


Flanged Head 188" O.D., 8¾" Overall Depth of Flange, Flat Size Before Flanging 182" Dia.
Head Contains~ Three 16¾" Dia. Flue Holes, three 11"×15" Manholes & two 6"×10" Handholes, each Reinforced with a Band.



Lukens Steel Company

Coatesville, Pa.

CONSOLIDATED STEEL CORPORATION, 165 Broadway, New York City, our sole representative in export trade. Send export inquiries to them.

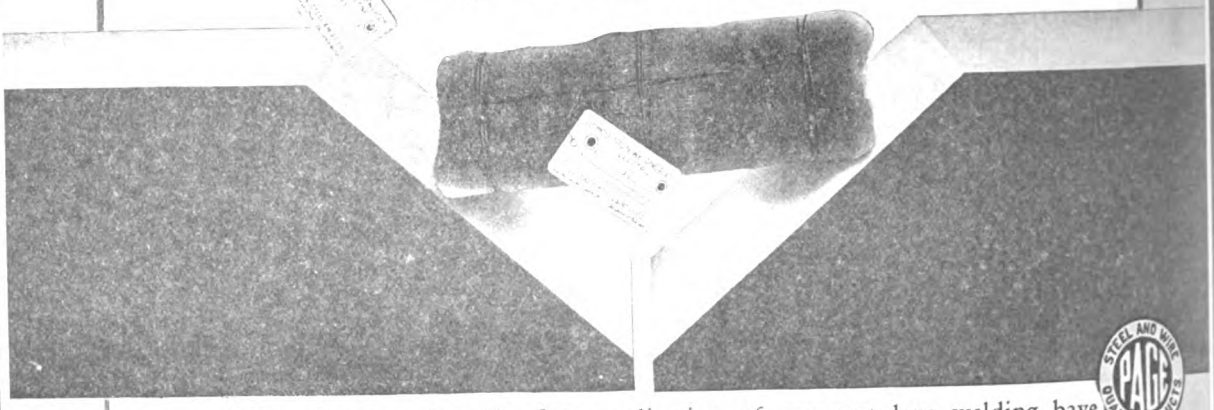
Generated on 2024-09-12 08:09 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The *Guaranteed* Welding Wire

ARMCO IRON WELDING RODS

For Oxy-Acetylene Welding

For Electric Arc Welding



All authorities since the first application of oxy-acetylene welding have agreed that the best welds are secured by the use of Pure Iron.

ARMCO IRON is guaranteed 99.84% pure iron and is positively the purest commercial iron in the world.

Practically all the electric welding wire specifications for mild steel welding state that the maximum total of impurities—carbon, manganese, phosphorus, sulphur, and silicon (five elements) must not exceed 91/100 of 1%.

ARMCO IRON is analyzed for *nine elements*, including oxygen, hydrogen, nitrogen, and copper, and even then the total impurities do not exceed 16/100 of 1%.

Therefore, ARMCO IRON Welding Rods flow freely, weld evenly, and lend themselves perfectly to finishing operations.

Our nearest branch office will give you the addresses of ARMCO distributers in your locality.

PAGE STEEL & WIRE CO.

Established 1882 as Page Woven Wire Fence Co.

The trade mark ARMCO carries the assurance that iron bearing that mark is manufactured by the American Rolling Mill Company with the skill, intelligence and fidelity associated with its products, and hence can be depended upon to possess in the highest degree the merit claimed for it.

Makers of ARMCO Iron Welding Rods and Electrical Wire; "Copperweld" Copper Clad Steel Wire; Wire Mill Products, Plain and Galvanized; Wire of Special Analysis; Wire Fencing for all Purposes; Factory Gates; Ornamental Iron Fence; Machine Guards; Tool and Stock Room Partitions; Architectural Iron.

Plants: Monessen, Pa., and Adrian, Mich.

SALES OFFICES: 30 CHURCH STREET, NEW YORK

CHICAGO: 29 South LaSalle Street

DETROIT: Book Building

SAN FRANCISCO: American Rolling Mill Company of California

CANADIAN DISTRIBUTORS: Taylor & Arnold, Ltd., Montreal, Toronto, Winnipeg

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

AMERICAN BUREAU OF SHIPPING

(INCORPORATED 1862)

The Standard American Classification of Shipping

STEVENSON TAYLOR	President
ELLSWORTH P. BERTHOLF	Vice-President
CHARLES A. McALLISTER	Vice-President
ANTONIO C. PESSANO	Vice-President
FRANK GAIR MACOMBER	Vice-President
LOUIS F. BURKE	Vice-President
WILLIAM H. TODD	Vice-President
JOHN W. CANTILLION	Secretary and Treasurer

MAIN OFFICE - 66 BEAVER STREET - NEW YORK

GREAT LAKES DEPARTMENT

H. N. Herriman, Manager

Rockefeller Building, Cleveland, Ohio

This Bureau supervises the construction of vessels throughout under established rules, tests all materials for hulls, machinery and boilers, and proof tests all anchors and chains, etc.

Classification of a vessel is a standard for builders and owners and the certificate is an authority for underwriters and shippers.

Generated on 2024-09-12 08:18 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Blackmer Marine Pumps are Universally Used

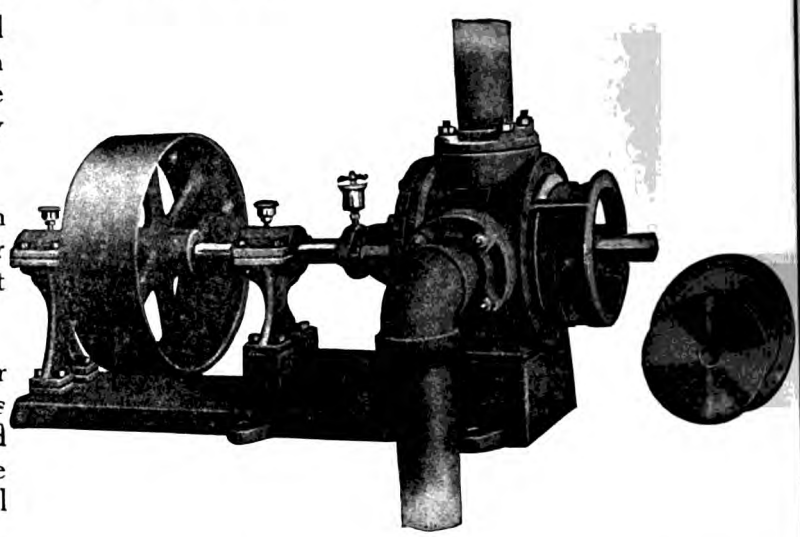
ONE of the first things you notice about a Blackmer Marine Pump is that only a fraction of the space usually required is necessary when one is used—and space on a boat is precious.

Although installed for bilge work Blackmer Marine Pumps can be used in emergencies for fire protection as well as for washing down decks.

These pumps are equipped with removable linings which can be replaced by anyone without special tools in a few minutes.

Their sturdy construction guarantees long life—their simple operation permanent favor.

The adoption of Blackmer Pumps for Marine Service is universal. You too should use this equipment. They are the eventual choice of critical buyers.



Consult the Blackmer engineers, they will relieve you of your pumping problems.

BLACKMER DISTRICT OFFICES:

BLACKMER ROTARY PUMP CO.
A. L. ROCK, *District Sales Manager,*
85 Murray Street, New York City

BLACKMER ROTARY PUMP CO.
J. FRANK SMITH, *District Sales Manager,*
1119 Real Estate Trust Bldg., Philadelphia, Pa.

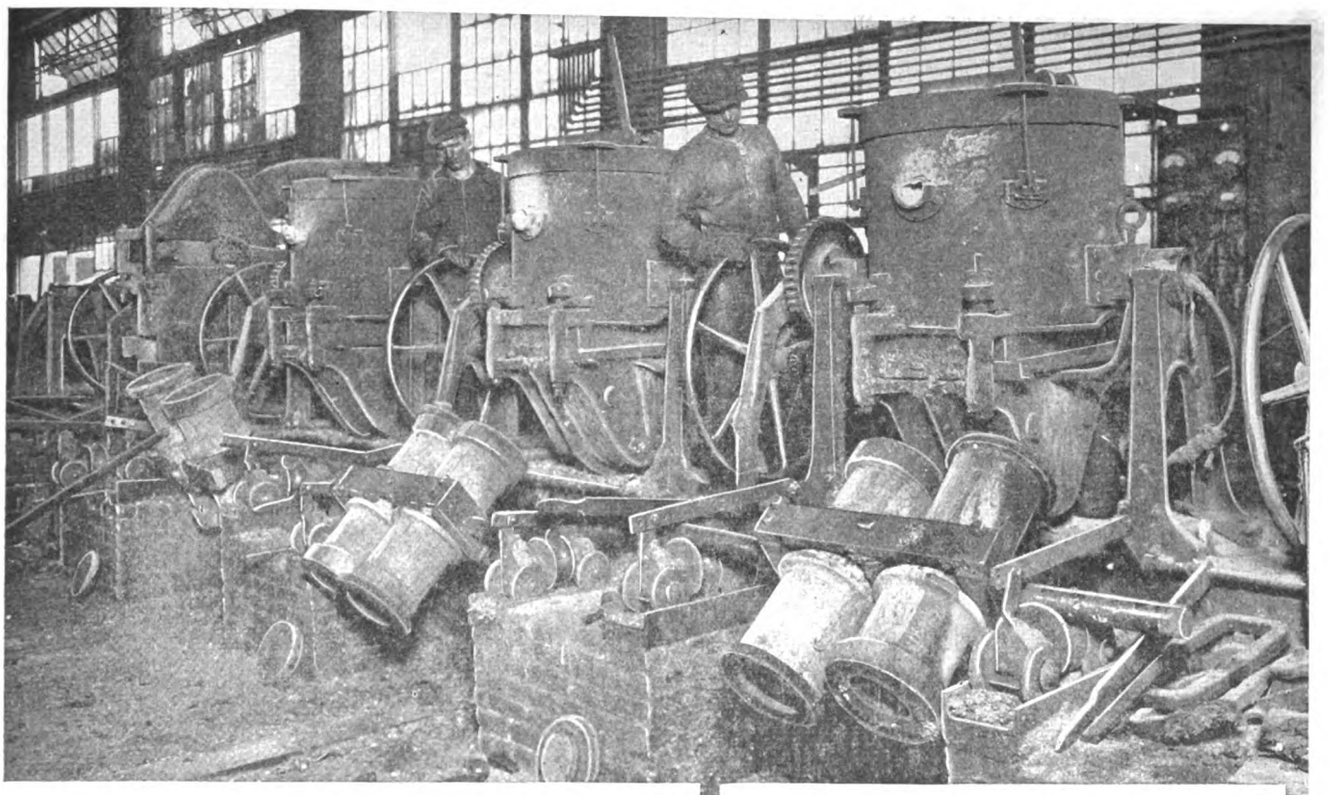
BLACKMER ROTARY PUMP CO.
ARTHUR J. SCHMITT, *District Sales Manager,*
315 Old Colony Building, Chicago, Ill.

BLACKMER ROTARY PUMP CO.
HARRY E. GATES, *District Sales Manager,*
424 E. 3rd Street, Los Angeles, Cal.

BLACKMER ROTARY PUMP CO.
R. L. CAVANAGH, *District Sales Manager.*
602 Bee Building, Omaha, Nebraska

Blackmer Rotary Pump Co.
Book Building **Detroit, Mich.**

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Part of One set of a number of Electric Furnaces which Produce

Bridgeport Electric Furnace Brass

The Best Condenser Tubes and Ferrules Are Made in the Electric Furnace

"Electrical Aids to Greater Production" states: "It has been found in most cases that a more uniform quality of metal can be produced in the electric furnace than in fuel-fired furnaces and that it is easier to produce an alloy of closely specified composition. These advantages can be accepted as inherent in electric furnace operation resulting from the greatly reduced loss of volatile metals and from the elimination of contaminating combustion gases."

For the past three years the Bridgeport Brass Company has been changing from the crucible process to the Electric Furnace.

Today the output is exclusively

BRIDGEPORT ELECTRIC FURNACE BRASS

(All Bridgeport Brass is made in Electric Furnaces)

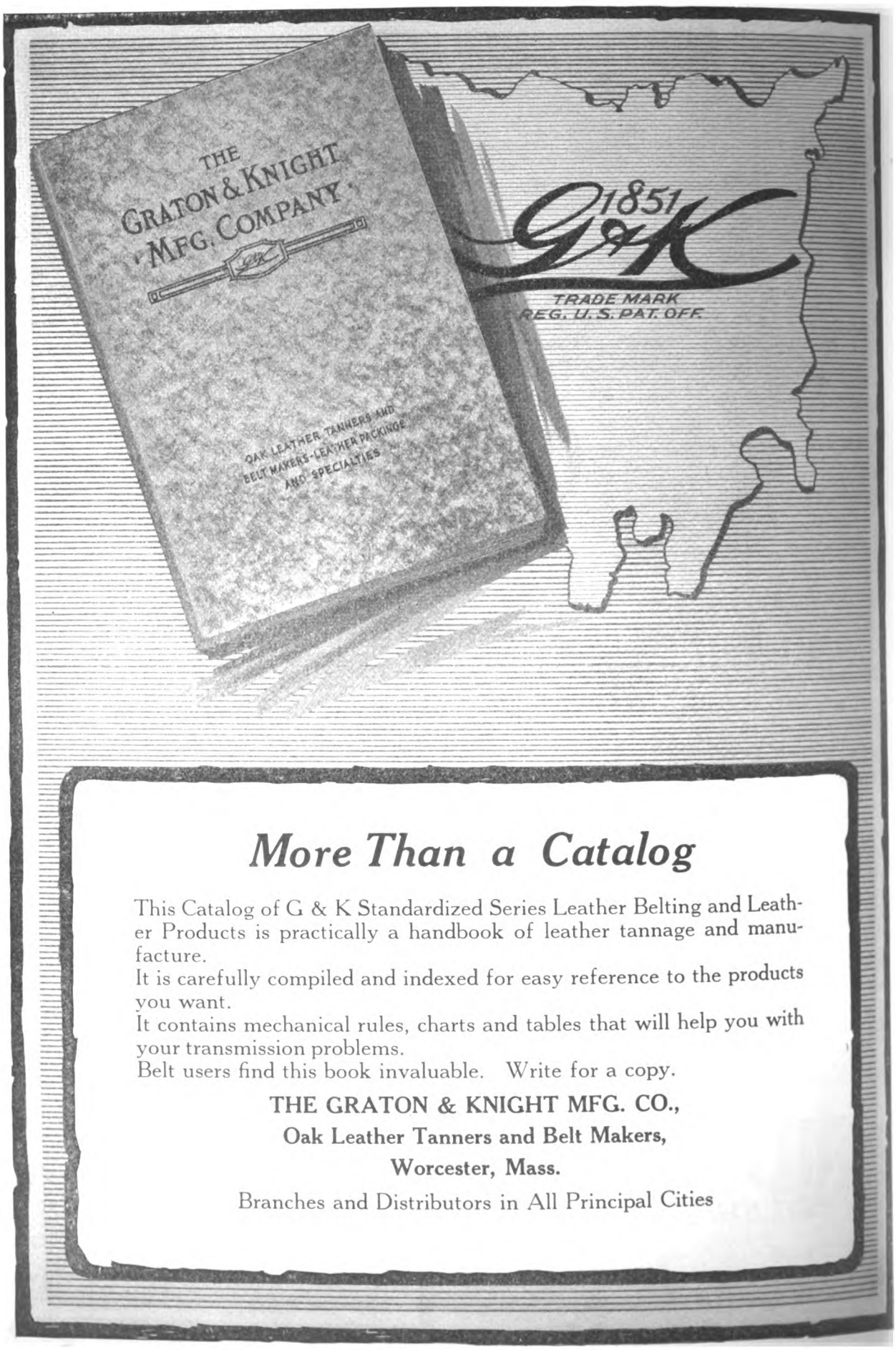
Condenser Tubes, Sheets, Rods and Stampings

Bridgeport Brass Company
Bridgeport Connecticut 2187

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN


THE
GRATON & KNIGHT
MFG. COMPANY
OAK LEATHER TANNERS AND
BELT MAKERS-LEATHER PACKINGS
AND SPECIALTIES
1851
G&K
TRADE MARK
REG. U. S. PAT. OFF.
More Than a Catalog
This Catalog of G & K Standardized Series Leather Belting and Leather Products is practically a handbook of leather tannage and manufacture.
It is carefully compiled and indexed for easy reference to the products you want.
It contains mechanical rules, charts and tables that will help you with your transmission problems.
Belt users find this book invaluable. Write for a copy.
THE GRATON & KNIGHT MFG. CO.,
Oak Leather Tanners and Belt Makers,
Worcester, Mass.
Branches and Distributors in All Principal Cities

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

UNITED STATES RUBBER COMPANY US RUBBER SYSTEM AND ASSOCIATED COMPANIES

United States Packings

"The Right Packing in the Right Place"

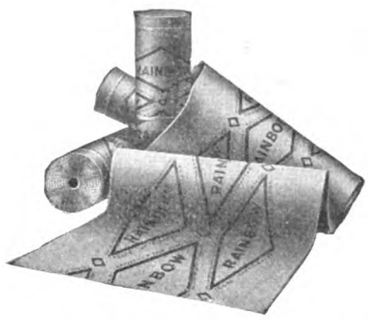
The United States Rubber Company manufactures a specific packing for every known mechanical condition.

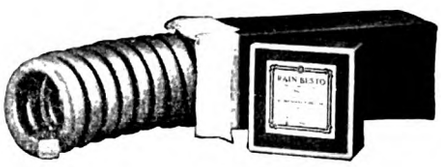
Each type, properly applied, will prevent waste of power or material, minimize shutdowns and increase plant efficiency. In thousands of important power plants the worth of United States Packings is being demonstrated daily.

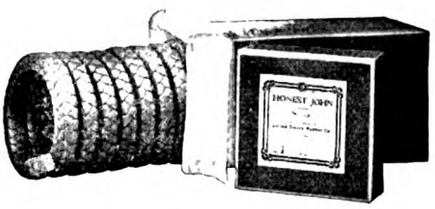
Our engineers are at your service to aid you in determining the most suitable type or combination to meet each of your needs.

A few of our prominent brands are:

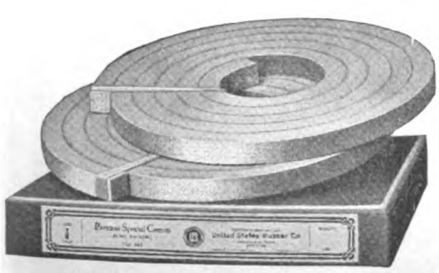
Rainbow Sheet	Peerless Braided Flax
Rain-Besto H. P. Spiral	Peerless Special Canvas Pump
Peerless Piston	Vanda Compressed Sheet
Success Diagonal	Wizard Valve Stem
Honest John Hydraulic	U. S. Rubber Pump Valves

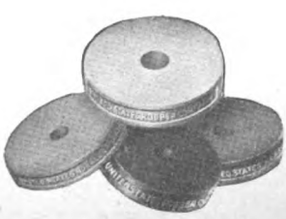






United States Rubber Company





When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:41 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

DEPENDABLE POWER

MIDWEST MARINE POWER

HERE are some features of Midwest Marine Engines it will pay you to consider in figuring on the installation of new power equipment to move your vessel or auxiliary

—*Low Cost of Propulsion*—is guaranteed because power is obtained from inexpensive crude or fuel oils.

—*Freedom from Breakdowns*—is assured by the everlastingly dependable qualities of all Midwest equipment.

—*Flexibility of Operation*—is obtained by means of simple, positive control for moving ahead or astern.

—*Inspection Made Easy*—by the open crank case.

—*Adjustments Simplified*—pistons and piston-rings remove without dismounting cylinder heads or connecting rods.

Write for detailed information concerning this or other Midwest products—or see our representatives in your nearest large city.

Oil Engine Products

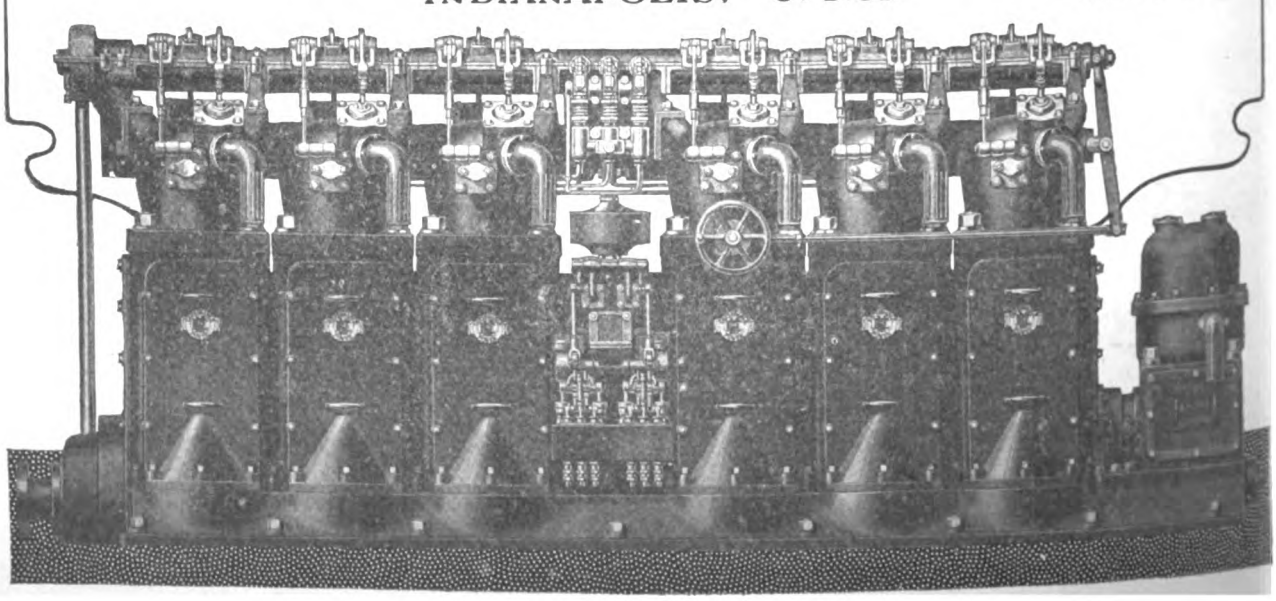
For Stationary Service—Midwest-Hvid Oil Engines, Horizontal, Four-Cycle, Standard and Special Electric: 20 25, 30 and 35 B.H.P.
Midwest-Diesel Oil Engines, Vertical, Four Cycle, Belted or Direct Connected for General Power or Electrical Service: 50, 75, 100, 150, 190, 250 and 375 B.H.P.

For Marine Service—Midwest-Diesel Oil Engines, Four Cycle, Clutch Type, 60, 90, 120 and 180 B.H.P.
Midwest-Diesel Oil Engines, Four-Cycle, Directly Reversible Type: 180, 240, 375 and 500 B.H.P.

MIDWEST
ENGINE COMPANY
INDIANAPOLIS, U. S. A.

Representatives in all principal cities.

New York
111 Broadway
New Orleans
617 Maison-Blanche Building
El Paso, Texas
303 Caples Building
Jacksonville, Florida
231 East Bay Street

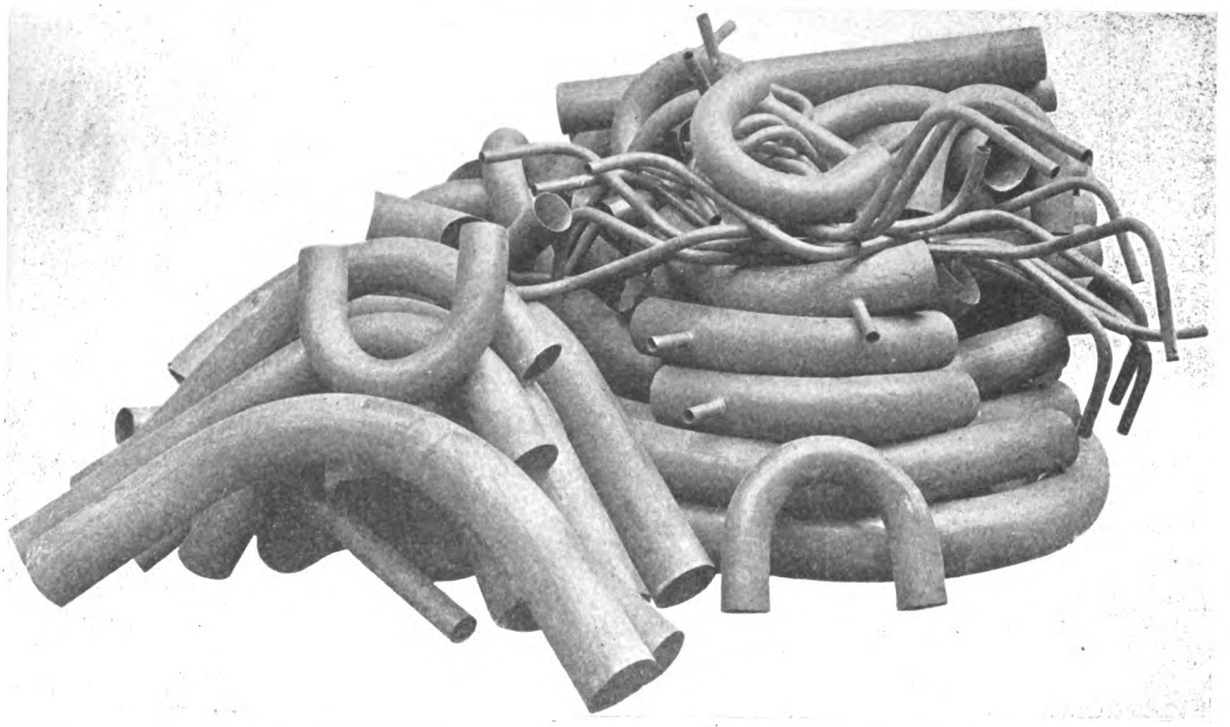


Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

This is BADGER COPPER PIPE

supplied to meet the war demands of

THE EMERGENCY FLEET CORPORATION



These pipes were all bent from seamless Copper Pipe, varying in size from 1″ to 10½″, the majority of which were bent without filling, the throat of each pipe being absolutely free from wrinkles, made possible by our improved method of pipe bending.

In addition to Copper Pipe bending, the Badger Service in the Marine field can take care of your requirements in seamless Copper Air Chambers, corrugated Copper Expansion Joints for high and low pressure, Copper Jacketed Kettles, Copper Coffee Urns, and any coppersmithing work that is used in the construction of a boat.

The Badger Service will give you the benefit of over seventy-five years' experience in solving the problems of your Copper work.

We are prepared to give your inquiries our immediate attention, and your orders prompt delivery.

E. B. BADGER & SONS CO.

101 Park Avenue
New York City

63-75 Pitts Street
Boston, Mass.

Generated on 2024-09-12 08:17 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The R-P Trade-Mark And What It Means

After fifteen years of engineering and manufacturing experience—years of pioneer work in the development of scientific lubrication—the products of the Richardson-Phenix Company have come to be recognized as standard and Richardson-Phenix lubrication engineers as the final authority on all problems pertaining to scientific lubrication.

In order that all products, and all literature and advertising of this company may be instantly identified, the trade-mark reproduced has been adopted.

This trade-mark is more than a mere label—it is a symbol of a service we alone can render, a service that embraces every branch of scientific lubrication, the correct application, reclamation and handling of lubricating oils. It stands for the highest development of one of the most important contributions in the industrial world. It represents a great advancement in engineering science.

In the future, know the Richardson-Phenix Company by this sign.

THE RICHARDSON-PHENIX CO.

LUBRICATION ENGINEERS AND MANUFACTURERS

WORKS 120 RESERVOIR AVE., MILWAUKEE, WIS.

NoKut Globe & Angle Valve.
Automatic Equipment for the scientific application, reclamation and handling of Lubricating Oils.
Automatic Oiling and Filtering Systems.
Oiling System Accessories.
Oil Filters and Reclaimers.
Force Feed Mechanical Lubricators.

NoKut (Scoville Patent) Pump Valves

Bulletin S-25 fully describes R-P Automatic Oil Circulating and Filtering Systems. It contains some mighty interesting engine data and is well worth your investigation. Write for your copy. It is waiting.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

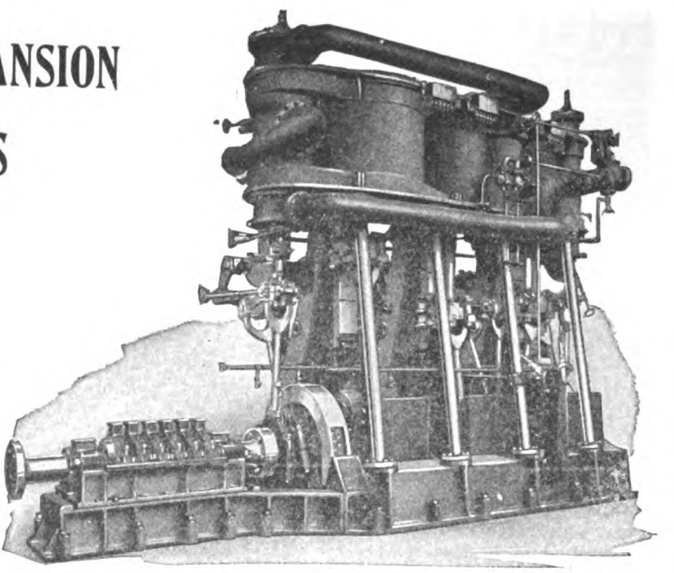
Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

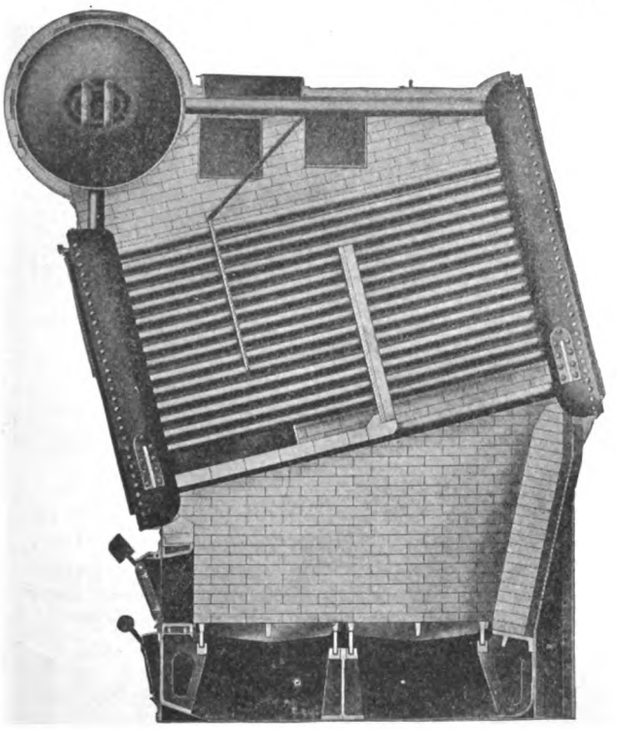
MARINE ENGINES AND BOILERS

COMPOUND AND TRIPLE EXPANSION MARINE PROPELLING ENGINES BUILT IN STANDARD SIZES FOR TUG BOATS AND SHIPS

Perfectly Balanced in design and operation



DURABLE **DEPENDABLE** **ECONOMICAL**



WATER TUBE BOILERS

OF

HIGH EFFICIENCY

BUILT FOR

MERCHANT SHIPS AND NAVY

One joint headers
Straight tube type
Generous combustion chamber
No rivets in contact with fire

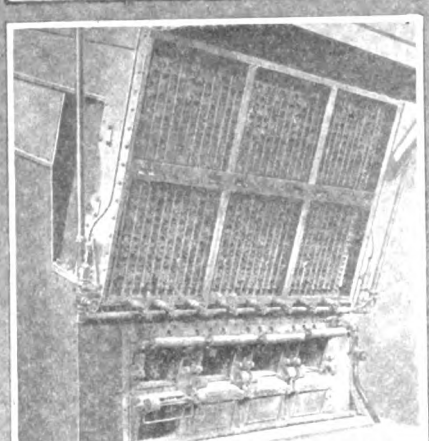
KEARFOTT ENGINEERING CO., Inc.

FREDERICK D. HERBERT, President

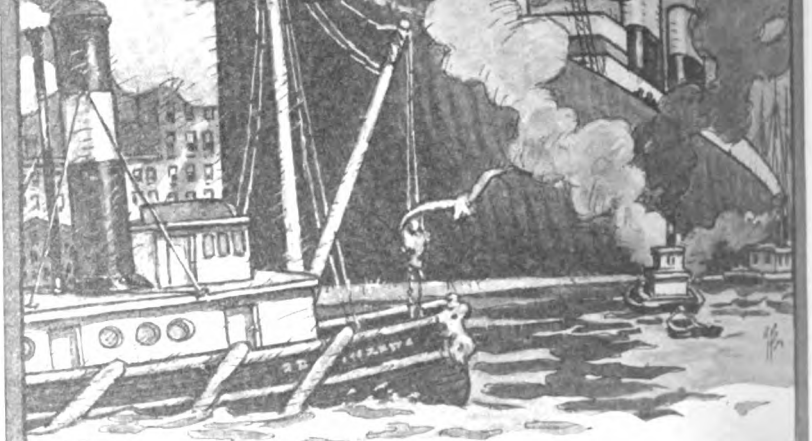
95 Liberty Street **New York City**

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Diamond SOOT BLOWERS Reduce Vessel Operating costs



DIAMOND SOOT BLOWERS ON FOSTER MARINE WATER TUBE BOILERS



There Are Diamond Soot Blowers For Every Type of Steamship!

and every steamship needs them

Why?

Because:

1. Their function is to remove ALL soot and fine ash deposits from the fire surfaces of the boiler. You do not expect efficiency from a gasoline or oil engine the cylinders of which are choked with carbon—you do not expect speed from a barnacle-incrusted hull—you do not look for clear-headed thinking and action from a man whose nasal passages are filled with a heavy cold. How, then, can you expect efficiency and economy from a dirty boiler?

2. If you grant that soot removal is necessary, you will undoubtedly admit that complete cleaning is the only cleaning worth while. There are just two systems which you can employ—the steam hose with hand lance, which is 50% effective, and it a dirty, disagreeable and tedious as well as dangerous job—and the rapid, thorough, mechanical soot blower, which is 95% effective.

3. As compared to hand lance cleaning, Diamond Soot Blowers will effect the following economies:
   (a) FUEL—a saving of 4 to 8 per cent.
   (b) BOILER EFFICIENCY—an increase of 4 per cent or more.

4. Increasing boiler efficiency of a steamship as Diamond Soot Blowers do, produces the following results:
   (a) SPEED—a material increase.
   (b) STEAMING RADIUS—a notable increase.

In marine use for over eighteen years, Diamond Soot Blowers have demonstrated their worth on boilers of every description, and steamships of every type. If your vessel, whether tug, dredge, ferry boat, small coasting steamer, trawler, lake passenger, ore freighter, ocean tramp, giant liner or battleship, is not equipped with Diamond Soot Blowers, write for full information, requesting your copy of Bulletin 134, "How Some Ship Owners Have Increased Their Profits."

DIAMOND POWER SPECIALTY COMPANY
Detroit, Michigan

Diamond SOOT BLOWERS - SAVE 4 to 8% FUEL

Generated on 2024-09-12 08:21 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Piping used on board ship should be free from welding-scale

—to minimize frictional resistance in feed, service and suction lines;

—to have an evenly distributed and closely adhering galvanizing coating;

—to reduce any tendency to corrosion caused by galvanic action which obtains when scale is present;

—to prevent trouble caused by dropping or settling scale in valves and other apparatus;

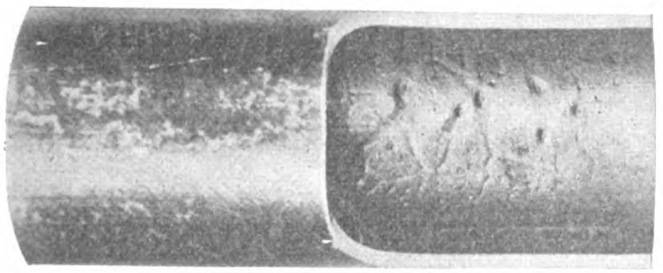
—to secure neatly finished surfaces with enamels, paints, etc., on exposed lines.

THESE ADVANTAGES ARE OBTAINED BY USING

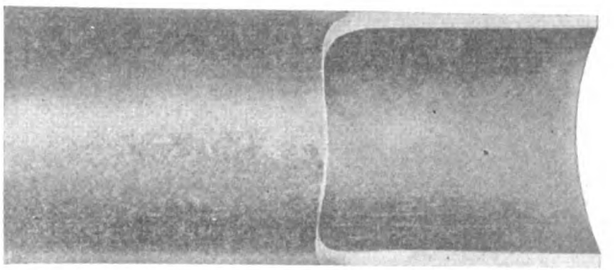
"NATIONAL"

Welding-SCALE FREE Pipe

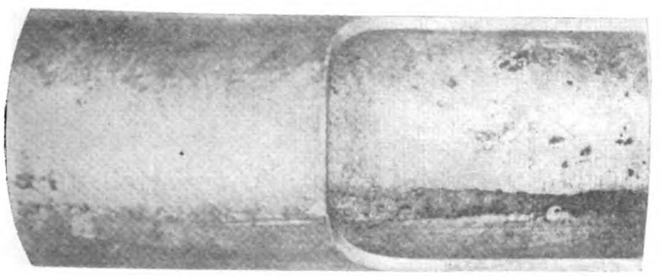
(Butt-weld pipe with the heavy mill-scale or welding-scale removed)



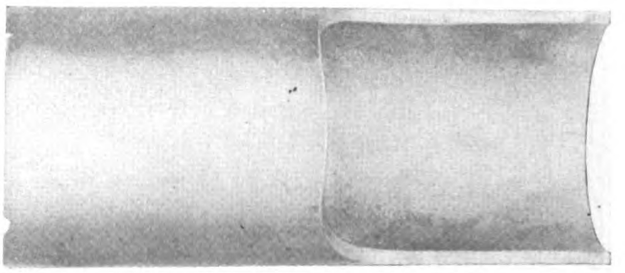
Ordinary black butt-weld pipe, showing characteristic coating of welding-scale.



"NATIONAL" Welding-SCALE FREE Pipe, showing clean, smooth surfaces of this modern product.



Showing condition of galvanizing on ordinary, scale-covered butt-weld pipe.



Note even and close adherence of galvanizing on this "NATIONAL" Welding-SCALE FREE Pipe.

"NATIONAL" Bulletin No. 7 — MANUFACTURE AND ADVANTAGES OF "NATIONAL" Welding-SCALE FREE Pipe—contains a detailed description of the scale-removing process and its advantages. A copy will be sent free upon request.

NATIONAL TUBE COMPANY, PITTSBURGH, PA.

General Sales Offices: Frick Building

DISTRICT SALES OFFICES

Atlanta Boston Chicago Denver Detroit New Orleans New York Salt Lake City Philadelphia Pittsburgh St. Louis St. Paul
PACIFIC COAST REPRESENTATIVES: U. S. Steel Products Co. San Francisco Los Angeles Portland Seattle
EXPORT REPRESENTATIVES: U. S. Steel Products Co. New York City

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

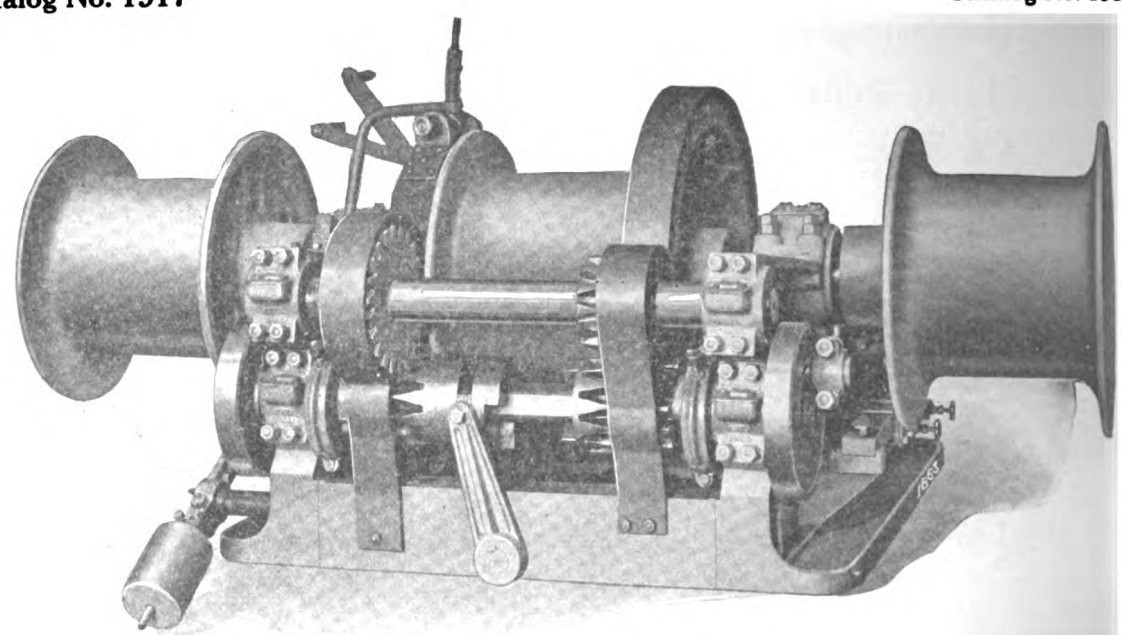
Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

LIDGERWOOD

STANDARD WINCHES

Single Geared
Catalog No. 1917

Compound Geared
Catalog No. 1917-C



Lidgerwood Compound Geared Cargo Winch No. 1917-C

Drum holds 800 feet of ¾″ rope and delivers a line pull of 10,000 lbs. with drum full of rope.

Built for handling a 30 Ton Boom with eight part purchase.

Light Loads at High Speed, Heavy Loads at Slow Speed.

Simple in control. One lever hoists, holds and lowers. All gears steel.

All parts interchangeable.

Lidgerwood Compound Geared Cargo Winch No. 1917-C is exactly interchangeable on the same bedplate and pipe flanges with Lidgerwood Standard No. 1917 Winch over 6,000 of which have been constructed and sold.

SHIP AND DOCK WINCHES—TOWING MACHINES
STEERING ENGINES

Send for catalog **Marine Machinery**

LIDGERWOOD MFG. CO. 96 LIBERTY STREET NEW YORK

BRANCHES

Chicago, Cleveland, Detroit, Pittsburgh, Philadelphia, Seattle, Los Angeles, London, England

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"AMERICAN"

No. 1 BEST

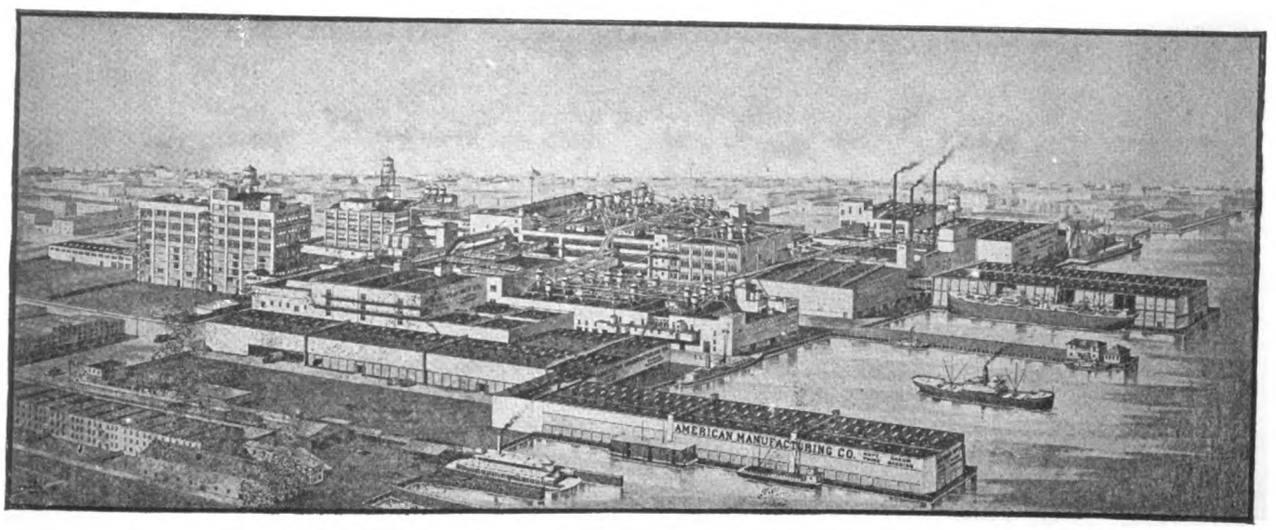
MARINE OAKUM

Made according to Bureau of Standard Specifications and so guaranteed by us

"AMERICAN"

MANILA ROPE

The favorite rope of the marine trade



For prices address Dept. R.

American Manufacturing Company

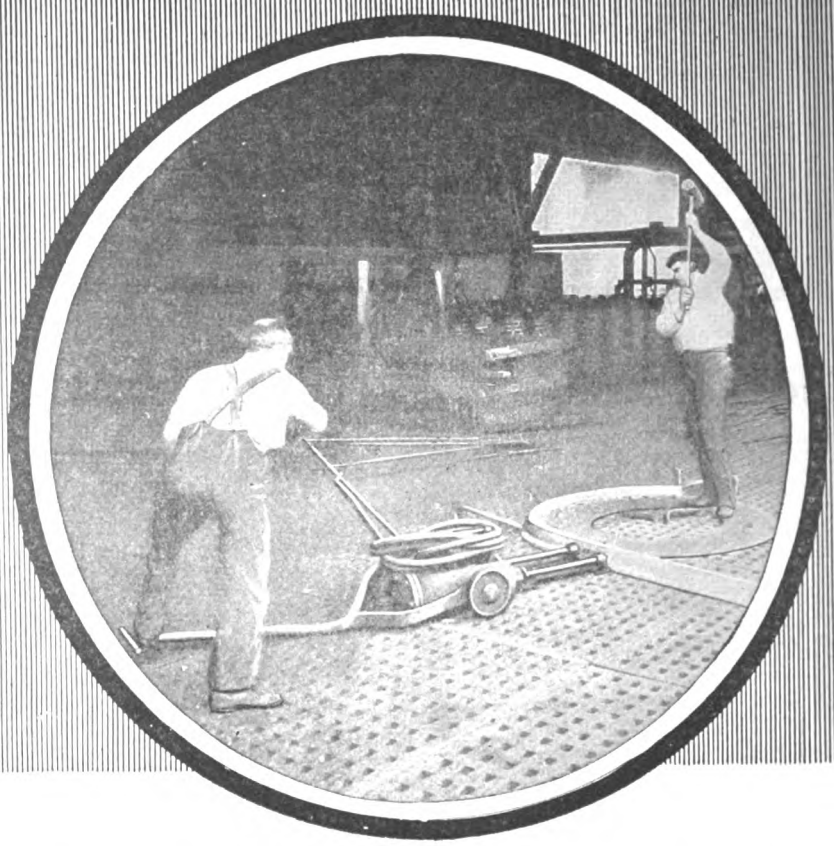
Noble & West Streets Brooklyn, N. Y. City

Western Branch: St. Louis Cordage Mills, St. Louis, Mo.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



40% Increased Production

The Pneumatic Ram or Frame Bender, shown above in actual operation, has made possible that phenomenal increase in the output of our bending slabs, with attendant savings in time, labor and money.

SIMILAR RESULTS ARE POSSIBLE IN YOUR PLANT!

Frame bars, which require bending to suit the form of ships, are heated in oilfired furnaces and bent on the usual cast-iron bending slabs before going to the punch shops.

But the bending is no longer done by the ordinary hand procedure of squeezing the bar against the form with a crescent-shaped "crowder," handled by a **HALF DOZEN MEN.**

Instead, the bending is quickly, neatly and accurately accomplished by a small, portable double-cylinder pneumatic ram operated by one man. This machine was designed and is produced at our plant.

QUOTATIONS PROMPTLY ON REQUEST. WIRE OR WRITE

Skinner & Eddy Corporation

SEATTLE, WASHINGTON

Performance Counts

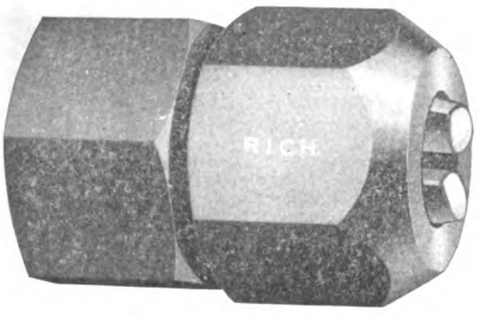
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

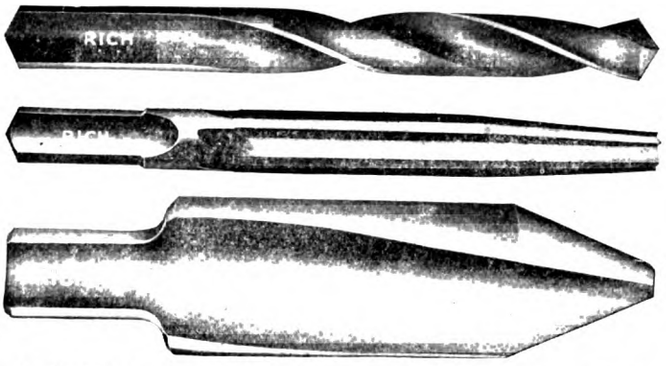
Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Eliminate Lost Time and Breakage of Costly Tools in Shipbuilding Work

BY USING RICH Chucks, Drills Reamers and Countersinks





The RICH COMBINATION consisting of Chuck (with taper or screw-on type) and Groove shank Tools meets those conditions found in shipyards where unskilled labor is the big factor to be reckoned with. The breakage of expensive drills, reamers and countersinks is an endless source of waste even under favorable conditions of operation. RICH Groove shank tools come in shorter lengths than taper shank tools and are thus better adapted for use with portable air or electric tools. They are held in the chuck with a positive grip and cannot slip out and fall through a deck or overboard. The RICH Combination is designed to withstand the rough usage of shipbuilding work, and in its rugged construction and economical operation practically solves the Small Tool problem of the shipyard.

Made to fit all types of air or electric tools.

Enables the operator to get close to the work.

With a turn of the chuck nut, tool can be changed quickly from drill to reamer or countersink.

RICH Groove Shank Drills, Reamers and Countersinks are forged from the bar, thus giving to the inherent properties of the bar the additional strength imparted by the forging process.

Get Our Prices

RICH TOOL CO.
RAILWAY EXCHANGE
CHICAGO

Ask For Literature

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

MIETZ OIL ENGINE

A saving of 40% is accomplished under actual service conditions, not manufacturers' test. The pioneer of this type operating on low grade fuels exclusively. Does not use any of the high pressures and is free from the use of complicated auxiliaries and does away entirely with Electric Ignition devices, carburetors, valves, etc. Built in sizes from 4 to 350 H. P. in both reversing gear and direct reversible types.

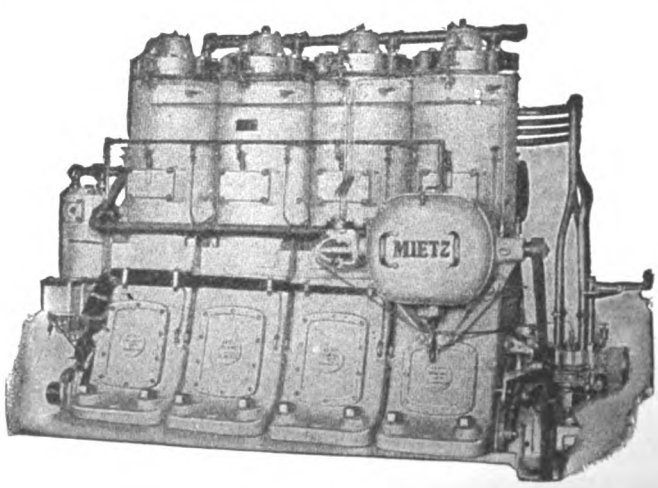
Gives a maximum of Simplicity, Reliability, Durability and Economy in every respect. Used by the United States Government, Foreign Governments and the Merchant Marines of the World.

We also build Stationary Engines for all power purposes.

Send for data, stating your requirements.

AUGUST MIETZ CORPORATION

428 EAST 19th STREET
NEW YORK



When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

CRANE

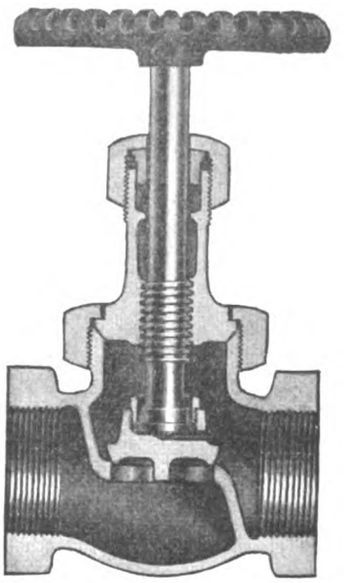
EXTRA HEAVY—REGRINDING—UNION BONNET

MARINE VALVES

Globe

Angle

Cross



No. 82E

These valves may be repacked when wide open and under pressure. They are made with packing gland, and are fitted with strong malleable iron non-heat hand wheel. The Union Bonnet adds strength and durability. They have liberal stem diameters and threads. Recommended for steam working pressures up to 250 pounds.

Sales Offices, Warehouses and Showrooms:

Boston, Springfield, Bridgeport, New York, Brooklyn, Newark, Camden, Philadelphia, Albany, Syracuse, Rochester, Buffalo, Baltimore, Washington, Savannah, Atlanta, Knoxville, Birmingham, Memphis, Little Rock, Muskogee, Tulsa, Oklahoma City, Wichita, St. Louis, Kansas City, Terre Haute, Cincinnati

FOUNDED BY R. T. CRANE, 1855

CRANE CO.

836 S. MICHIGAN AVE.

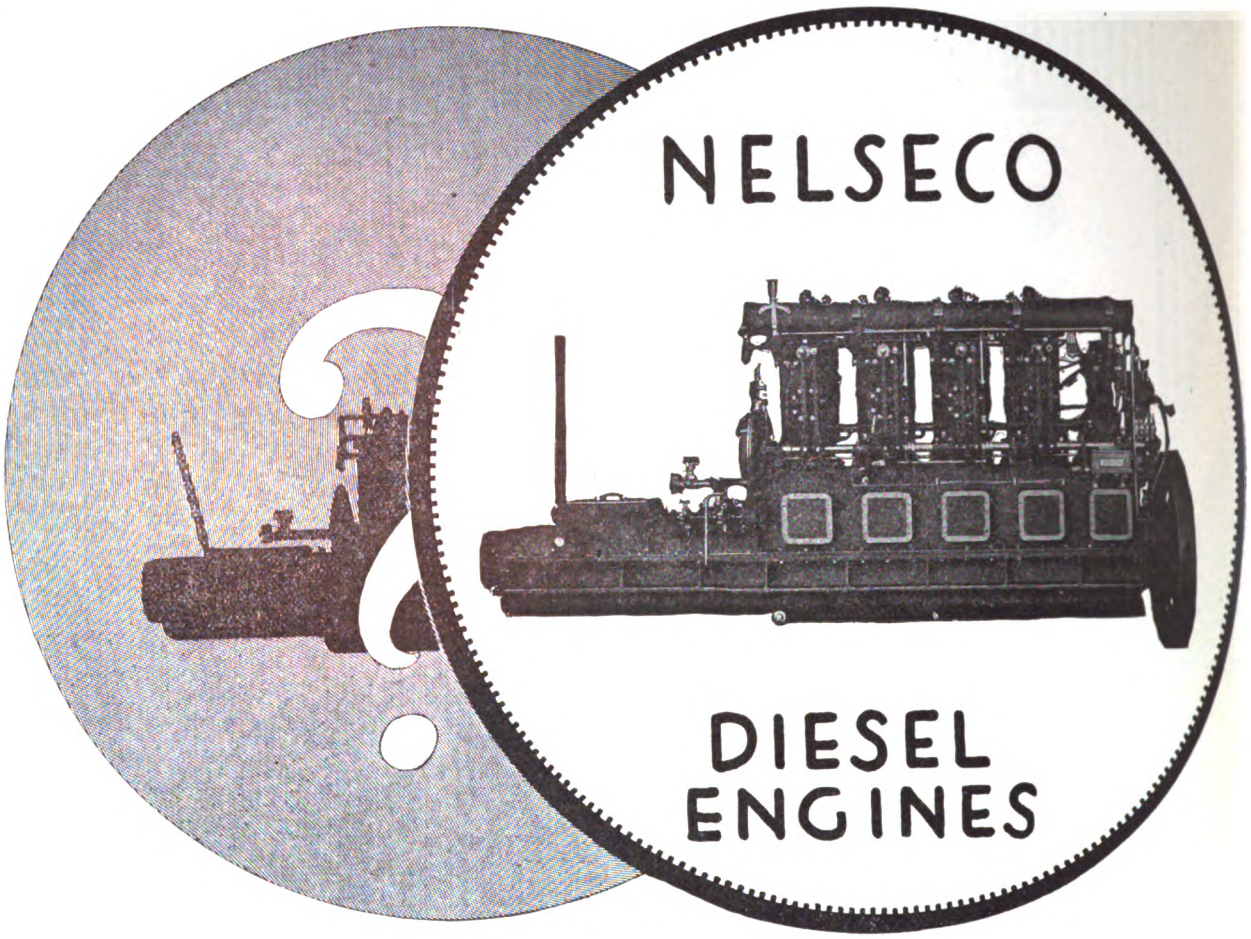
CHICAGO

Works: Chicago and Bridgeport.

Indianapolis, Detroit, Chicago, Rockford, Grand Rapids, Davenport, Des Moines, Omaha, Sioux City, St. Paul, Minneapolis, Duluth, Fargo, Watertown, Aberdeen, Great Falls, Billings, Spokane, Seattle, Tacoma, Portland, Pocatello, Salt Lake City, Ogden, Sacramento, Oakland, San Francisco, Los Angeles

CRANE, LIMITED—Calgary, Alb., Montreal, Que., Toronto, Ont., Winnipeg, Man., Vancouver, B. C.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Certainty—

THE SHADOW OF DOUBT
NEVER ENTERS THE MIND OF USERS
OF
NELSECO
MARINE DIESEL ENGINES

GOLD MEDAL
HIGHEST AWARD
MARINE DIESEL ENGINES
Panama-Pacific Exposition

Ships thus equipped are propelled efficiently and dependably with as low fuel consumption as is possible to secure through any like operation. Over 150,000 H. P. now in service in American and Foreign Vessels or on order.

Sizes: 120, 180, 240, 360, 480 to 2000 B.H.P.

NEW LONDON SHIP & ENGINE CO., Groton, Conn., U. S. A.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

W. L. Brubaker & Bros.

Hudson Terminal

50 Church Street

New York

MFRS.
TAPS, DIES AND REAMERS
COMMON SENSE SCREW PLATES

PLEASE SEND ALL ORDERS AND COMMUNICATIONS TO THIS OFFICE WHICH FACILITATES SHIPMENTS.

High Speed Spiral Fluted Bridge Reamers

Made of

The Best Grade of High Speed Steel

You want Quality and Service.

We have tempered this steel for MANY YEARS so know how to bring out its best QUALITIES.

We know how to make a Bridge Reamer (THIRTY YEARS OF EXPERIENCE)

BEST GRADE STEEL plus TEMPERING plus EXPERIENCE gives you a High Speed Reamer you can rely on to do your work on **Boilers, Cars** and **Structural Bridge Work.**

W. L. BRUBAKER & BROS.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

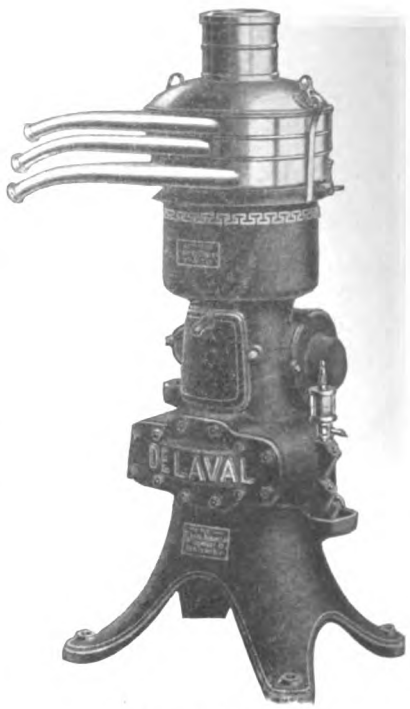
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

THE DE LAVAL OIL PURIFIER

The De Laval Oil Purifier effects a great economy in machinery repairs by effectively keeping grit, dirt, water and carbon out of the lubricating system. It eliminates premature destruction of cylinders, bearings, pumps and all other moving parts which would be rapidly destroyed if the impurities were allowed to remain in the oil. Less power is consumed because of more perfect lubrication.

The De Laval Oil Purifier also insures a substantial economy of oil because the dirty oil is not pumped overboard but is returned to its original lubricating qualities each time it is purified, and used over and over again. Considerably less oil is carried when the De Laval Oil Purifier is used, which means economy of oil storage space and the tying up of less capital in oil.

The Oil Purifier is economical in space and power, requiring less than two square feet of space and from one-half to two H. P. to drive, according to size.



De Laval Oil Purifier Steam Driven

Write to nearest sales headquarters for Crank Case Oil Bulletin No. 102, and also for Marine Bulletin No. 103

THE DE LAVAL SEPARATOR COMPANY

Largest Manufacturers of Centrifugal Machinery in the World

165 Broadway NEW YORK

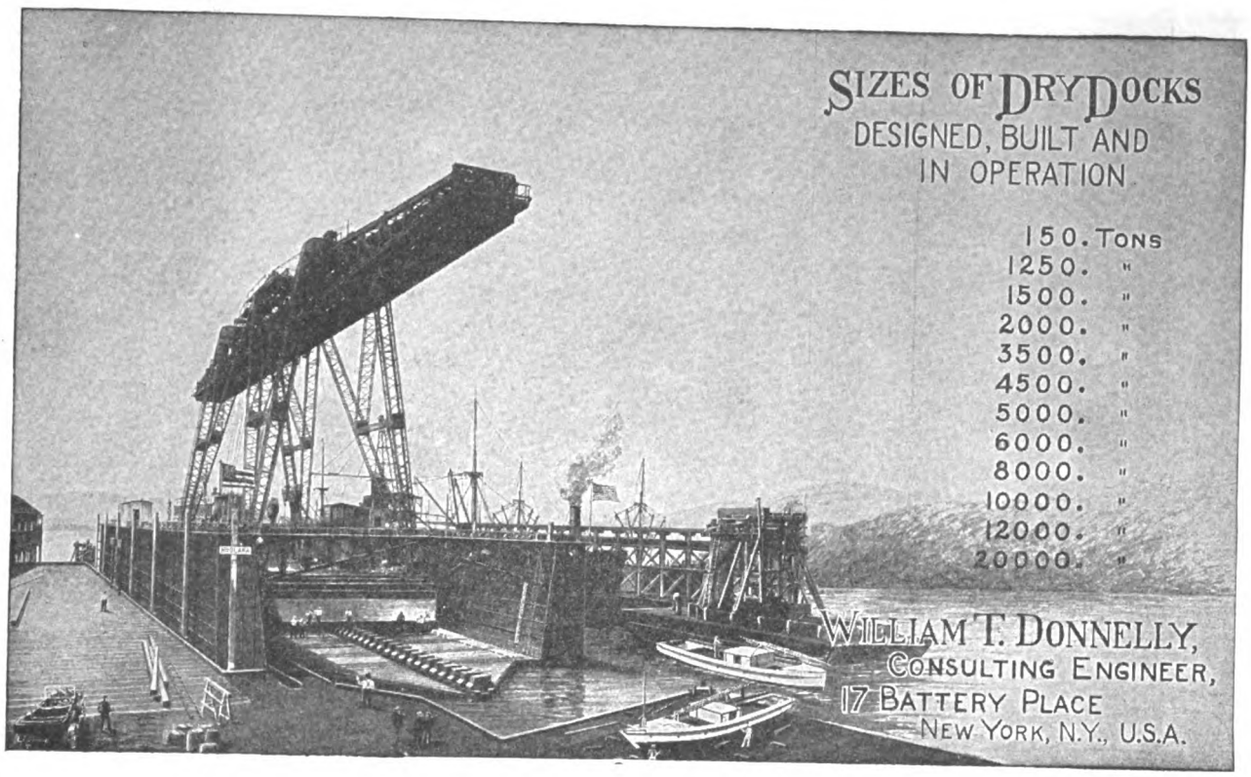
29 E. Madison St. CHICAGO

MANUFACTURERS' SELLING AGENTS

De Laval Steam Turbine Co. Trenton, N. J.

De Laval Dairy Supply Co. San Francisco, Cal.

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



THE STABILITY OF DONNELLY DRY DOCKS IS WELL ILLUSTRATED IN ABOVE PHOTOGRAPH, SHOWING DOCKING OF A 150 TON DERRICK ON DRY DOCK OF THE INTER-ISLAND NAVIGATION COMPANY, HONOLULU. THE DERRICK HAS DISPLACEMENT OF 1900 TONS. NOTE THE HIGH CENTER OF GRAVITY.

20,000 TON FLOATING DRY DOCK, DESIGNED FOR THE BETHLEHEM SHIPBUILDING CORPORATION, AT SPARROWS POINT, MARYLAND. NOW IN COMMISSION AND HIGHLY SUCCESSFUL.

NOW UNDER CONSTRUCTION TWO ADDITIONAL DRY DOCKS FOR THE ABOVE COMPANY

10,000 TON FLOATING DRY DOCK DESIGNED FOR ALABAMA DRY DOCK AND SHIPBUILDING CO. NOW AT WORK.

Designer of Floating Dry Docks. Steel, Wood, or Steel and Wood Construction. Pontoon Type, Sectional Type, Box Docks.

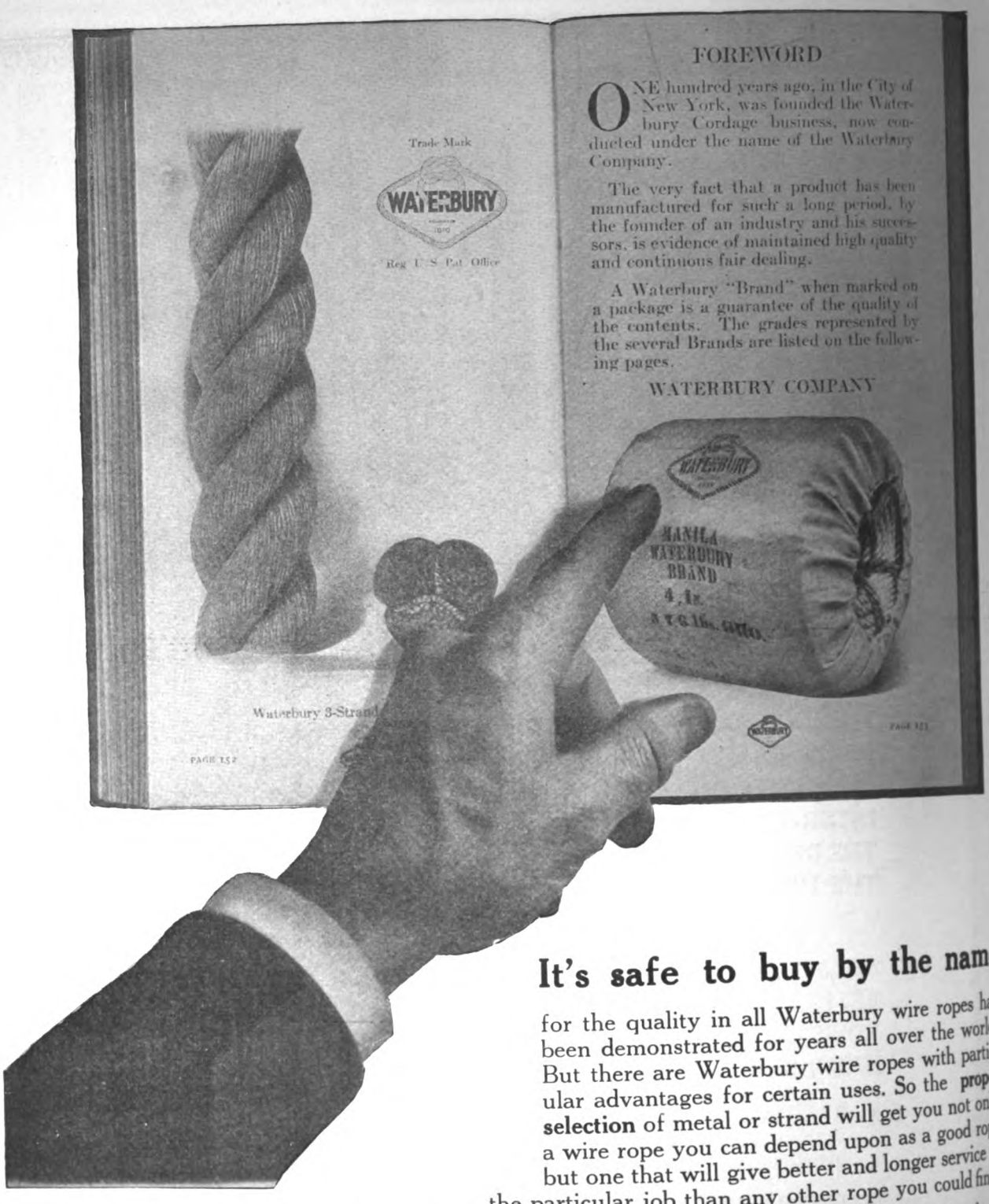
Plans on hand for sizes from 1,000 tons to 20,000 tons lifting capacity.

For plans and specifications apply
WILLIAM T. DONNELLY
Naval Architect and Marine Engineer
17 Battery Place
New York City, N. Y.
Cable Address: "Nellydon" all codes.

Ship Repair and Shipbuilding Plants. Reinforced Concrete Pier Construction. Harbor Improvements.

Plans and specifications and superintendence of construction.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN


FOREWORD
ONE hundred years ago, in the City of New York, was founded the Waterbury Cordage business, now conducted under the name of the Waterbury Company.
The very fact that a product has been manufactured for such a long period, by the founder of an industry and his successors, is evidence of maintained high quality and continuous fair dealing.
A Waterbury "Brand" when marked on a package is a guarantee of the quality of the contents. The grades represented by the several Brands are listed on the following pages.
WATERBURY COMPANY
Trade Mark
WATERBURY
Reg. U. S. Pat. Office
Waterbury 3-Strand
PAGE 152
MANILA
WATERBURY
BRAND
4 1/2
PAGE 121

It's safe to buy by the name

for the quality in all Waterbury wire ropes has been demonstrated for years all over the world. But there are Waterbury wire ropes with particular advantages for certain uses. So the **proper selection** of metal or strand will get you not only a wire rope you can depend upon as a good rope but one that will give better and longer service to the particular job than any other rope you could find.

The more that you know about rope, the more economically you can buy. In the Waterbury Rope Handbook—a clothbond, 220-page pocket manual—you'll find all you need to know about ropes of every description. The handbook on your desk means money in your pocket. Ask for a copy—it's free.

WATERBURY COMPANY

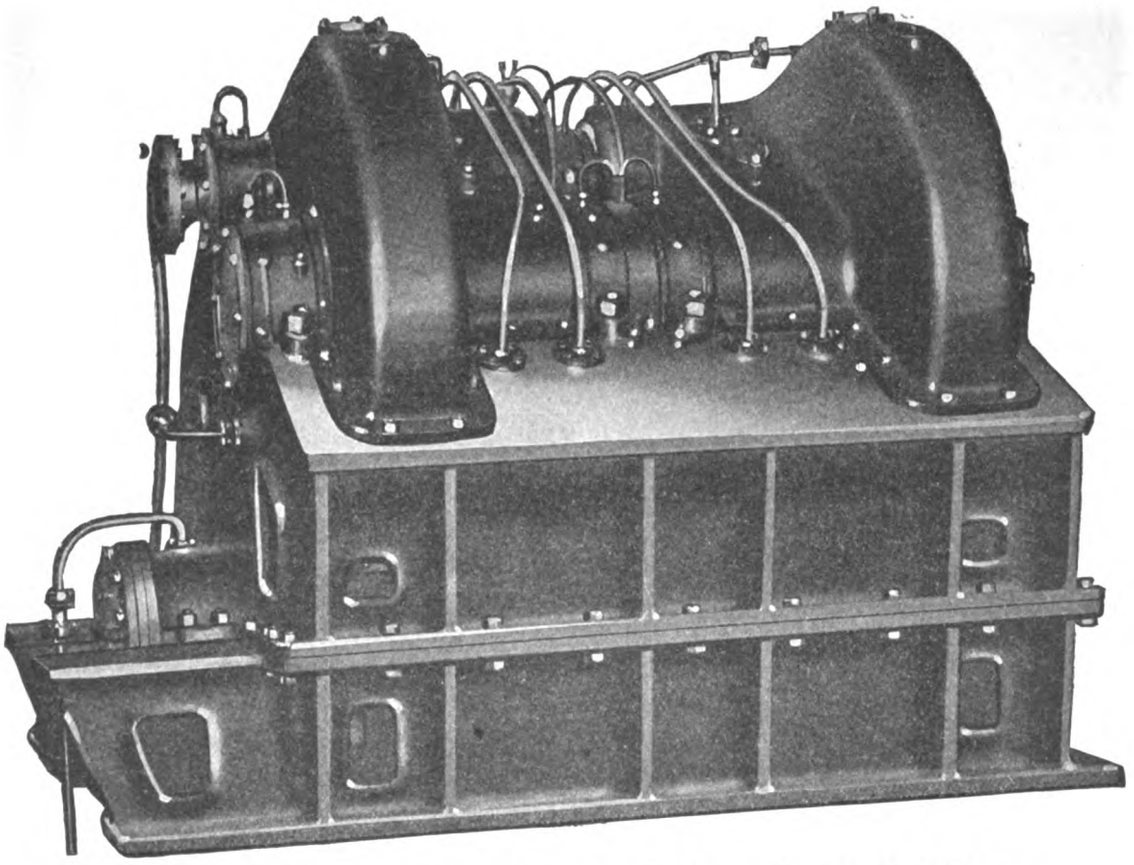
63 PARK ROW, NEW YORK

CHICAGO.....1315-1321 W. Congress Street
SAN FRANCISCO.....151-161 Main Street
DALLAS, TEXAS.....A. T. Powell & Co.
NEW ORLEANS.....1018 Madison Blanche Bldg.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

We furnished twenty of these Units early this year.



Side View of Double Reduction Marine Gear for Single Turbine Drive, 1500 H.P., 3600 to 90 R.P.M., including Kingsbury Thrust Bearing.

"We have recently received additional contract for fifty-nine to the same design."

THE FALK COMPANY

MILWAUKEE **WISCONSIN, U. S. A.**

M. P. FILLINGHAM
50 Church St., New York City

F. W. GRIMWOOD
Rialto Bldg., San Francisco, Cal.

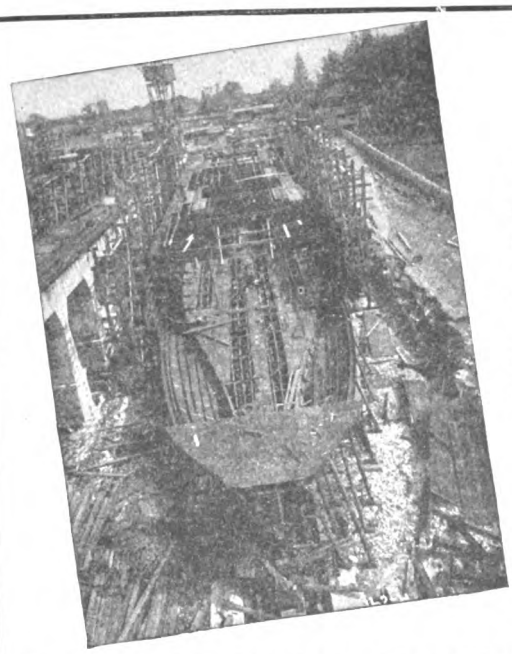
W. O. BEYER
1007 Park Bldg., Pittsburgh, Pa.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

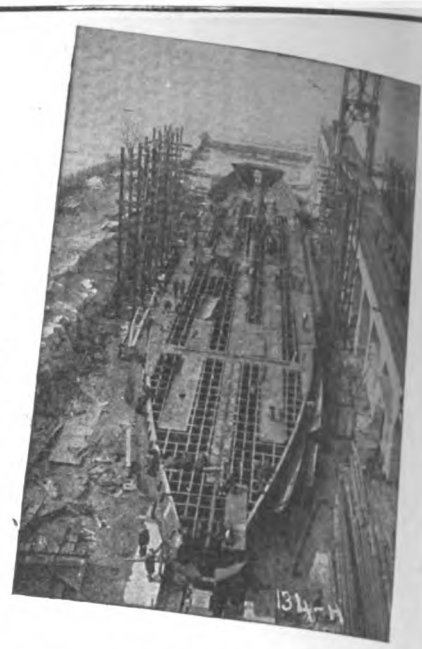
Generated on 2024-09-12 08:17 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN



Three stages of construction with the finished vessel, the S.S. "Tollard" 8800 tonner built at the Groton Iron Works at their Groton Plant, Groton, Connecticut, on the Isherwood System.



ISHERWOOD SYSTEM OF SHIP CONSTRUCTION

Licensees and Builders Who Have Built or Are Building Ships under Isherwood System in America

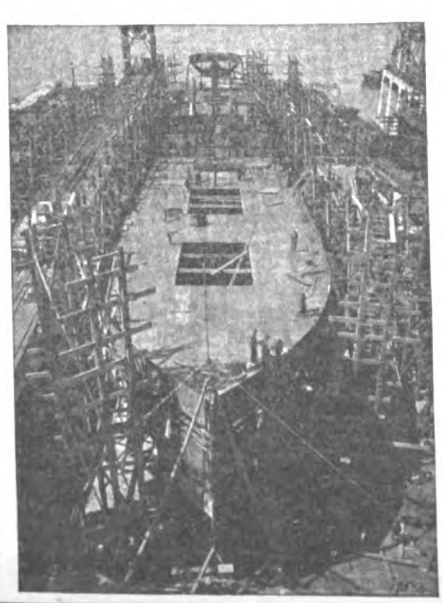
THE AMERICAN SHIPBUILDING CO. (various shipyards on Great Lakes): Headquarters, Cleveland, Ohio.
THE AMERICAN BRIDGE CO., Pittsburg, Pa.
THE AMES SHIPBUILDING & DRY DOCK CO., Seattle, Washington.
THE BALTIMORE DRY DOCKS & SHIPBUILDING CO., Baltimore, Maryland.
THE BETHLEHEM SHIPBUILDING CORPORATION, LTD., Harlan Plant, Wilmington, Del.
THE BETHLEHEM SHIPBUILDING CORPORATION, LTD., Quincy Plant, Quincy, Mass.
THE BETHLEHEM SHIPBUILDING CORPORATION, LTD., Sparrow's Point Plant, Sparrow's Point, Md.
THE BETHLEHEM SHIPBUILDING CORPORATION, LTD., Union Plant, San Francisco, Cal.
THE CALIFORNIA SHIPBUILDING CO., Long Beach, California.
THE CHINESE-AMERICAN COMPANY, Boston, Mass.
THE COLUMBIA RIVER SHIPBUILDING CORPORATION, Portland, Oregon.
THE WILLIAM CRAMP & SONS SHIP & ENGINE BUILDING CO., Philadelphia, Pa.
OSCAR DANIELS CO., New York. (Shipyard, Tampa, Fla).
JOHN H. DIALOGUE & SON, Camden, N. J.
J. F. DUTHIE & CO., Seattle, Washington
THE ELLICOTT MACHINE CORPORATION, Baltimore, Maryland.
THE FEDERAL SHIPBUILDING CO., Hackensack Meadows, nr. Newark, N. J.
THE FOUNDATION COMPANY, New York.
THE GREAT LAKES ENGINEERING WORKS, Detroit, Mich.
THE GROTON IRON WORKS, Groton, Conn.
THE HOLSTROM SHIPBUILDING CO., Baltimore, Md.
MERRILL & STEVENS, Jacksonville, Fla.
THE MOORE SHIPBUILDING CO., San Francisco, Cal.
THE NATIONAL SHIPBUILDING CORPORATION, Violet, Louisiana.
THE NEWPORT NEWS SHIPBUILDING & DRY DOCKS CO., Newport News, Va.
THE NEW YORK SHIPBUILDING CO., Camden, N. J.
THE NORTHWEST STEEL COMPANY, Portland, Ore.
R. G. PACKARD COMPANY, Bayonne, New Jersey.
THE PENNSYLVANIA SHIPBUILDING CO., Philadelphia, Pa.
THE PETROLEUM TRANSPORT CO., Los Angeles, California.
THE PITTSBURGH STEAMSHIP CO., Cleveland, Ohio.
THE SEATTLE CONSTRUCTION & DRY DOCK CO., Seattle, Washington.
THE SKINNER & EDDY CORPORATION, Seattle, Washington.
THE SOUTHWESTERN SHIPBUILDING COMPANY, East San Pedro, Cal
G. M. STANDIFER CONSTRUCTION CORPORATION, Vancouver, Washington.
THE STATEN ISLAND SHIPBUILDING CO., N.Y.
SUDDEN & CHRISTENSEN, San Francisco, Cal.
THE SUN SHIPBUILDING CO., Chester, Pa.
THE SWENSON SHIPBUILDING CO., New York.
THE TANK SHIPBUILDING CORPORATION, Newburgh, N. Y.
THE TEXAS STEAMSHIP CO., Bath, Maine.
THE TODD DRY DOCK & CONSTRUCTION CORPORATION, Tacoma, Washington.
THE UNITED STATES & CUBAN ALLIED WORKS ENGINEERING CORPORATION, New York and Havana, Cuba.
THE VIRGINIA SHIPBUILDING CORPORATION, Alexandria, Va.
THE WESTERN PIPE & STEEL COMPANY OF CALIFORNIA, San Francisco, Cal.

SEND FOR FULL PARTICULARS TO

J. W. ISHERWOOD

New York, 17 Battery Place, Phone Whitehall 1558

London, 4, Lloyds Ave. E.C.2
CABLE: ISHERCON



SUITABLE FOR ALL KINDS OF VESSELS

A few of the advantages attaching to the Isherwood System are:

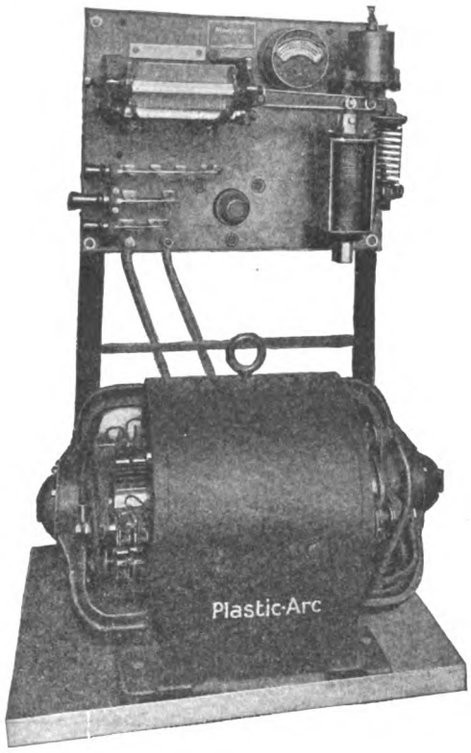
Increased Strength,
Increased Deadweight Carrying Capacity,
Reduced Cost of Maintenance,
Increased Capacity for Bale Goods,
Improved Ventilation,
Reduced Vibration.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

NEW WELDING UNIT

A small, light-weight, compact and durable outfit containing every feature desirable in welding equipment.

This new **Plastic-Arc** *unit will successfully weld practically any metal, of any bulk, without preheating dismantling, etc. Cast-iron can be successfully welded.*



The **Plastic-Arc** *System is the only system of welding that maintains a constant heat at the weld, insuring thorough fusion of the original and the added metal, consequently strong welds, regardless of the skill of the operator.*

This outfit operates on the well known Wilson principles of constant voltage of 35 and an automatically regulated current, insuring a constant critical heat at the weld.

Iron, cast-iron, steel, boiler plate, copper, brass, aluminum, etc., can be welded with this outfit, *without preheating.*

Three switches on the panel provide an easy means of current adjustment, between 25 and 175 amperes, insuring a proper heat at the weld, to suit the fusing point of the particular metal to be welded.

This outfit can be furnished as a motor driven unit, with a motor of practically any characteristics to suit the local source of power supply; also as a gasoline driven unit, or the 35 volt generator can be furnished without a motor to be driven by any means locally available. The normal generator speed is 1800 R.P.M.

These sets can be furnished as portable outfits if desired.

Write for further details and a copy of our new Manual Catalog No. 5.

Wilson Welder & Metals Co., Inc.

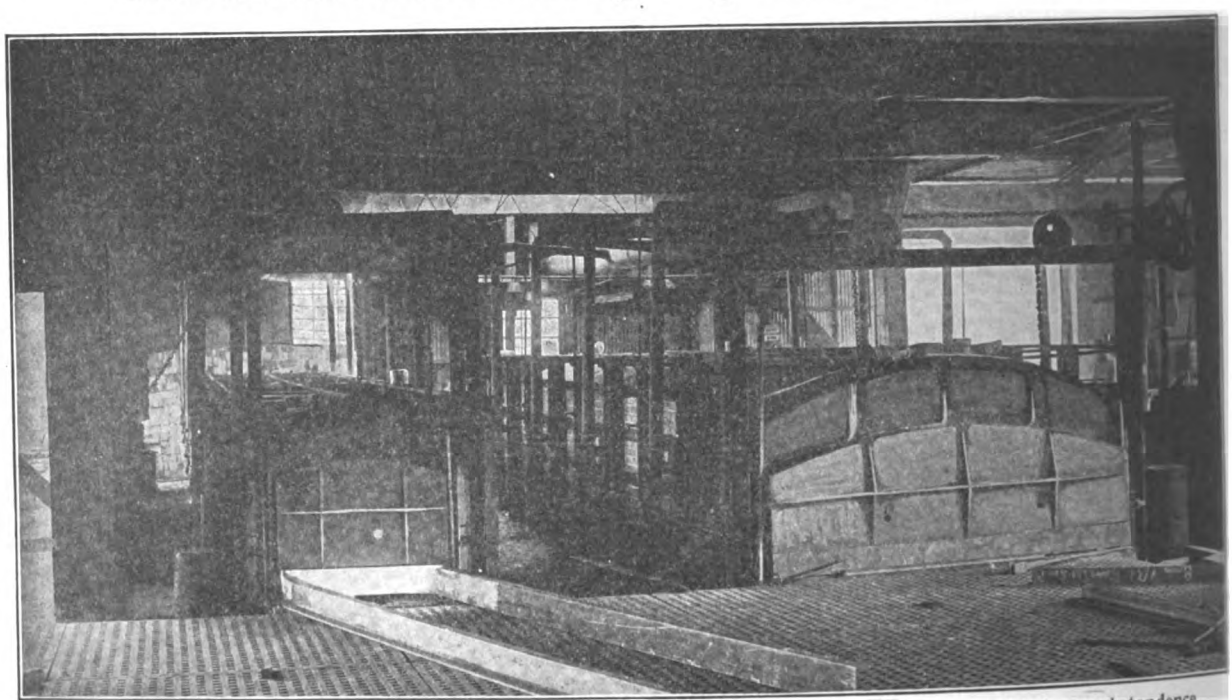
4 Rector Street, New York

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

BAUSH

SHIPYARD FURNACES

Oil Furnaces for Plate, Angle and Bar Heating



We are prepared to erect complete, or to furnish drawings, burners, cast iron parts and superintendence

WE ALSO MAKE

CAST IRON BENDING SLABS

FOR SHIPYARD USE FROM OUR STANDARD PATTERNS

SELLING AGENTS

MANNING, MAXWELL & MOORE, Inc. Main Offices: 119 West 40th St., New York

ASK FOR BULLETIN 8

BRANCHES

Chicago, Cincinnati, Seattle — San Francisco, Hong Kong, China — Philadelphia, Boston, Buffalo — Mexico City, Mexico, St. Louis — Detroit, Pittsburgh, Brussels — Cleveland, Milwaukee, New Haven — Yokohama, Japan, Paris

BAUSH MACHINE TOOL COMPANY

METALS DIVISION NEW YORK

165 BROADWAY (WORKS: SPRINGFIELD, MASS.)

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

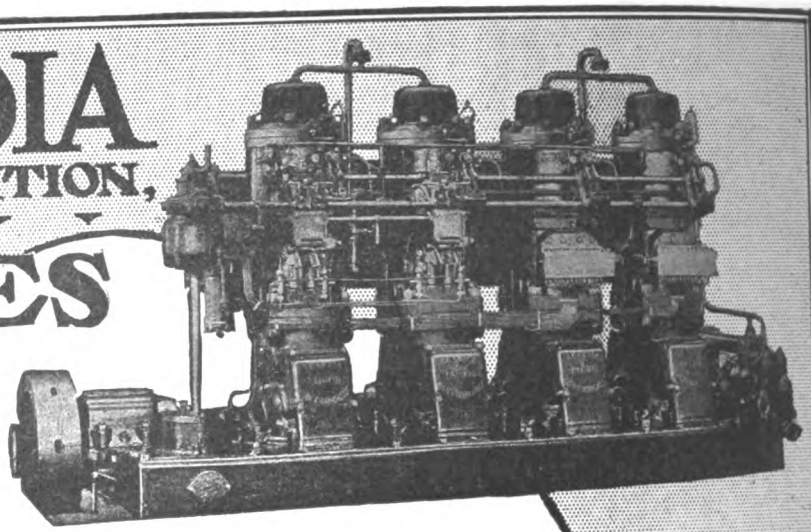
Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SKANDIA
SURFACE IGNITION, HEAVY OIL ENGINES



SKANDIA ENGINES are built in standard sizes from 5 to 500 H. P. They are the logical engine for moderate speed vessels. They are economical, reliable, and run on low fuel consumption.

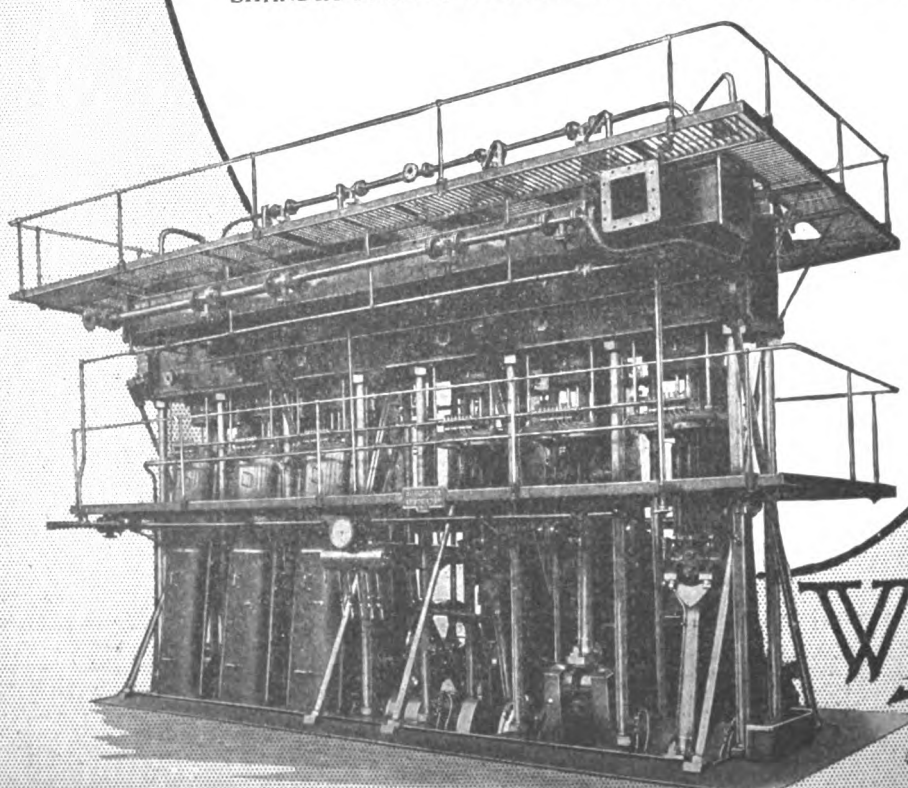
WERKSPOOR DIESEL ENGINES represent the most modern type of Diesel Engine, embodying every refinement. Engines of the 4-cycle type built from 340 H. P. and up. All engines built in U. S. A.

H. S. JOHANNSEN

50 CHURCH STREET, NEW YORK

Cable Address: "HESMIJO" Telephone: 3462 CORTLANDT

Agent for Atlantic Coast, Great Lakes, Gulf and Cuba of the SKANDIA PACIFIC OIL ENGINE CO., OAKLAND, CALIF.



WERKSPOOR TRUE DIESEL ENGINES

Generated on 2024-09-12 08:14 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Shipyard Air Tool Service

That word—SERVICE—means, at the start, supplying you with the best air tools that it is possible to make. Tools that are simple, powerful and dependable, easy to keep in repair, and seldom needing repair. They are called "Little David."

Next, it means providing you with powerful, dependable compressors, of any size or drive to meet your particular requirements. Ingersoll-Rand compressors are famous all over the world for their ability to deliver the goods—one recently ran 1488 hours without a stop in an emergency, and was none the worse for it.

Finally, it means that we take a continued interest in seeing that tools and compressor give continuous and satisfactory service as long as you have them. Branches and warehouses are located all over the country for this purpose.

Write today and let us know your needs.

INGERSOLL-RAND COMPANY

GENERAL OFFICES, 11 BROADWAY, NEW YORK

DOMESTIC OFFICES

BUTTE, DULUTH, DENVER, BOSTON, EL PASO, SEATTLE, ST. LOUIS, CHICAGO, NEW YORK, KNOXVILLE, SCRANTON, HOUGHTON, CLEVELAND, PITTSBURGH, BIRMINGHAM, LOS ANGELES, DETROIT, NEW ORLEANS, PHILADELPHIA, SAN FRANCISCO, SALT LAKE CITY, JOPLIN

FOREIGN OFFICES

LONDON, PARIS, MADRID, MILAN, RIO DE JANEIRO, MONTREAL, MEXICO CITY, MELBOURNE, JOHANNESBURG, SANTIAGO, CHILE, LIMA, PERU, KOBE, JAPAN, MANILA, TOKIO, HONOLULU, HAVANA, BUENOS AIRES, ANTOFAGASTA, LA PAZ, BOLIVIA, VANCOUVER, B.C.

APPLY TO NEAREST OFFICE

Little David AIR TOOLS

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Bradley
Cushioned Helve Hammer

The Bradley Hammer has been found practically indispensable for forging liners in shipyards. Accurate and rapid, these hammers attain big results in many kinds of forgings. They are built to stand the strain of continuous work.

Pressure on the foot treadle starts the hammer by bringing the idler pulley against the down traveling side of a continuous running loose belt. When the treadle is released a brake stops the hammer.

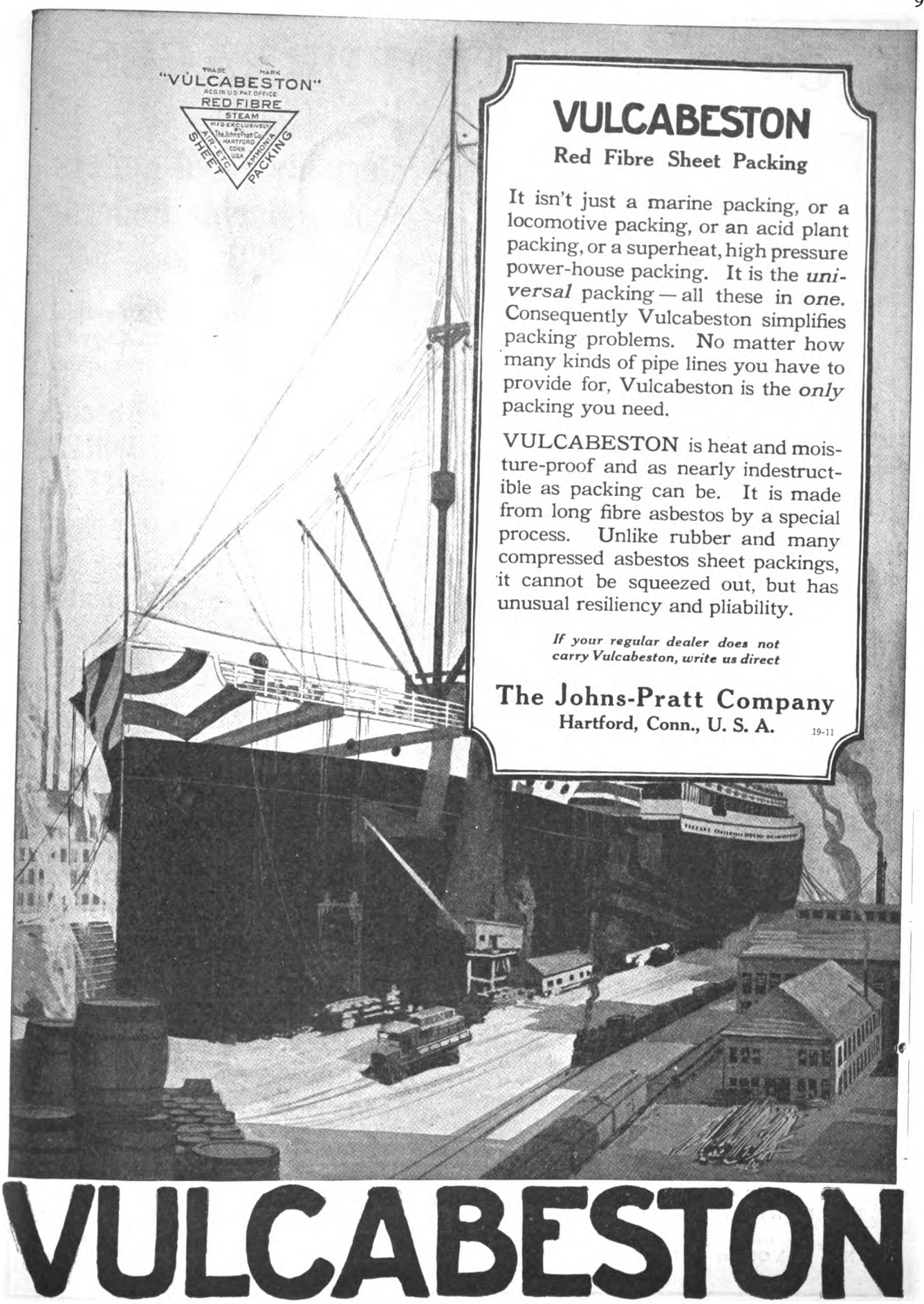
Both the speed and force of the blow are thus completely under control of the operator.

Write for further details.

C. C. Bradley & Son, Inc.
Syracuse, N. Y.
Established 1832

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



VULCABESTON

Red Fibre Sheet Packing

It isn't just a marine packing, or a locomotive packing, or an acid plant packing, or a superheat, high pressure power-house packing. It is the *universal* packing — all these in *one*. Consequently Vulcabeston simplifies packing problems. No matter how many kinds of pipe lines you have to provide for, Vulcabeston is the *only* packing you need.

VULCABESTON is heat and moisture-proof and as nearly indestructible as packing can be. It is made from long fibre asbestos by a special process. Unlike rubber and many compressed asbestos sheet packings, it cannot be squeezed out, but has unusual resiliency and pliability.

If your regular dealer does not carry Vulcabeston, write us direct

The Johns-Pratt Company
Hartford, Conn., U. S. A. 19-11

VULCABESTON

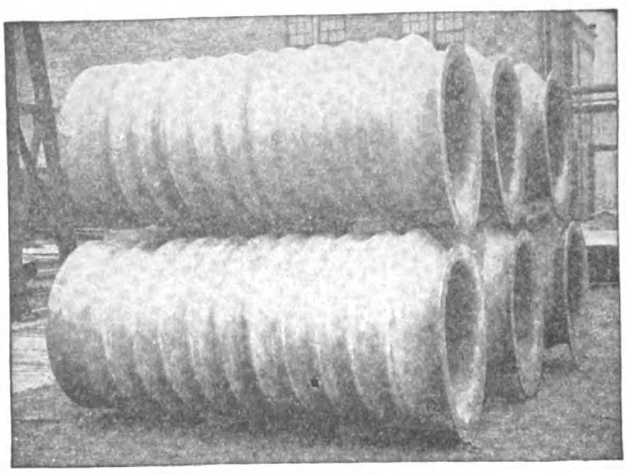
When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

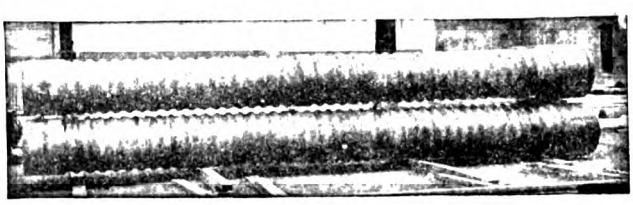
Generated on 2024-09-12 08:16 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

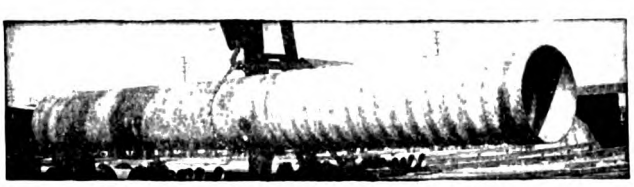
Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

CORRUGATED FURNACES







FOR

Internally Fired Boilers
Scotch Marine Boilers
Oil Stills, Etc.

Made from highest quality firebox steel in accordance with Lloyd's or U. S. Government requirements.

LAP WELDED DRUMS and FLUES, FORGED STEEL BOILER FLANGES, FORGED STEEL FLANGES For High Pressure Steam Mains and Riveted Pipe.

Stock for Prompt Shipments

TAYLOR SEAMLESS FORGED STEEL BOILER NOZZLE

Sizes 1½" ta 8" inclusive.

One piece forging solid steel without weld. Make the Boiler wrought steel throughout. Needless delays are eliminated by its use.

Spiral Riveted Pipe, Lap Welded Pipe Exhaust Steam and Hydraulic Supplies.

Catalog mailed upon request.

MANUFACTURED BY **AMERICAN SPIRAL PIPE WORKS**

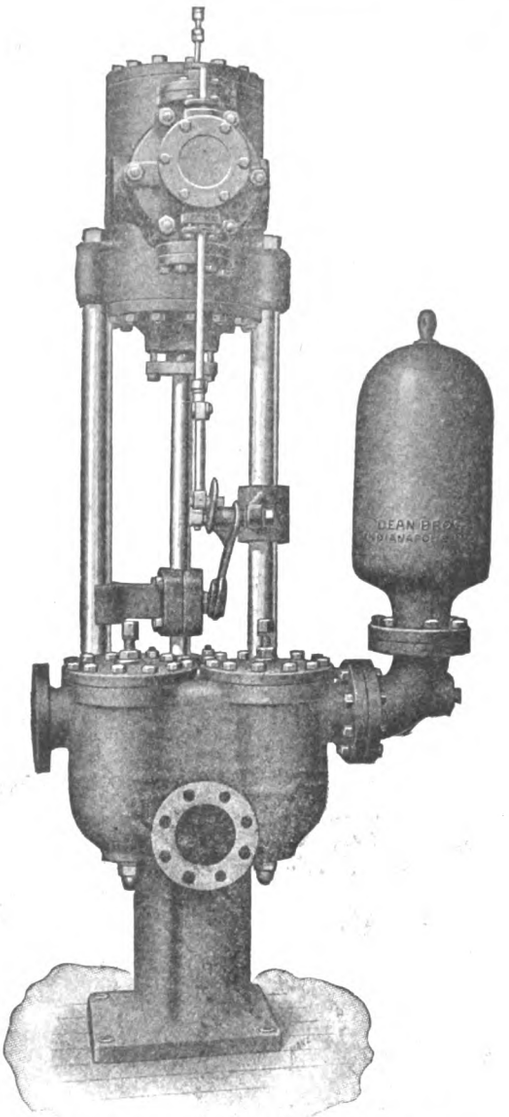
New York Office: 50 CHURCH STREET Main Office and Works: CHICAGO (P. O. BOX 485)

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



ATLANTIC TYPE BOILER FEEDER

Throughout the War Dean Bros. operated their entire factory on pumps for the Emergency Fleet, and made deliveries on time. In many cases shipments were made in advance of schedule.

Dean Bros.' organization that made possible this wonderful record is not too large to give personal attention to all orders or too small to carry out any contracts undertaken.

NEW YORK SALES OFFICE
141 Broadway

SEND FOR CATALOGUE 111

DEAN BROS. STEAM PUMP WORKS. INDIANAPOLIS.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

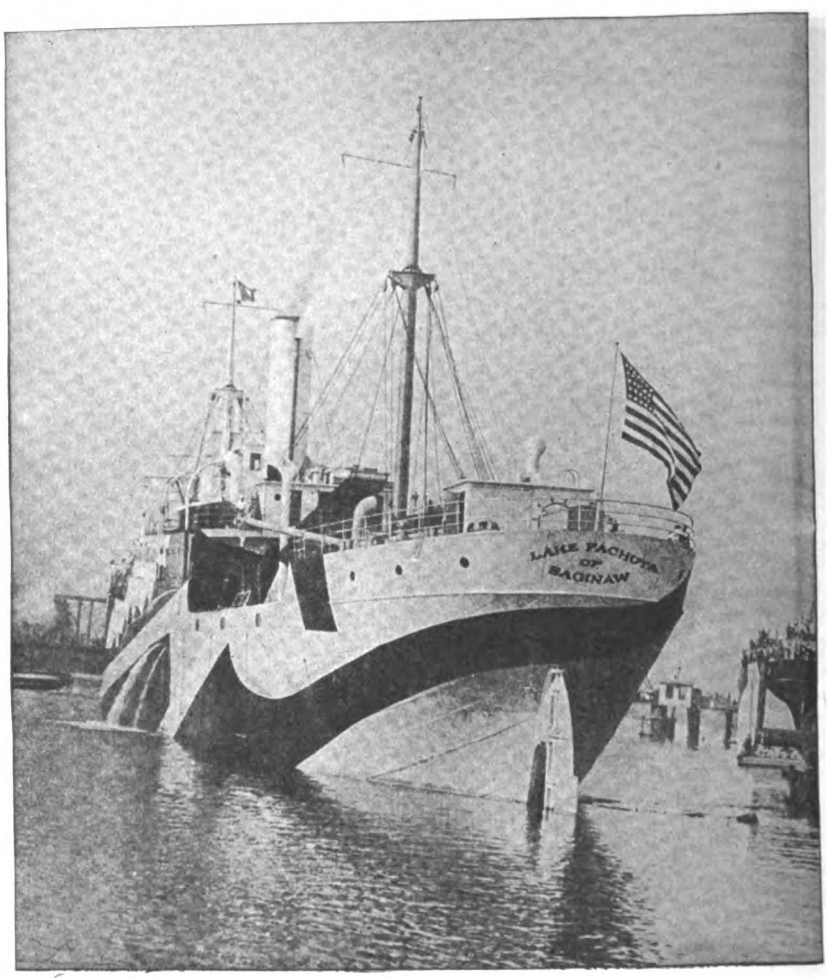
Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SAGINAW SHIPBUILDING CO.

STEEL SHIPS

FOR LAKE AND OCEAN SERVICE



Our Plant, covering forty acres, has *SIX* large building berths; over 160,000 square feet of shop floor space, and our equipment is most complete and modern in every detail.

We solicit your inquiries

General Offices and Plant, Saginaw, Michigan, U.S.A.

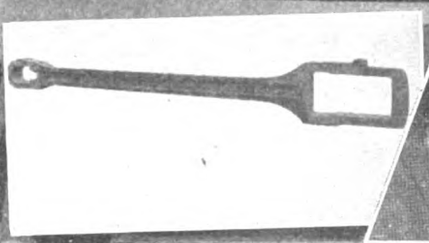
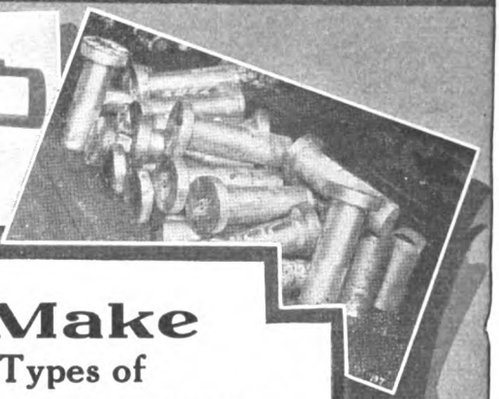
When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

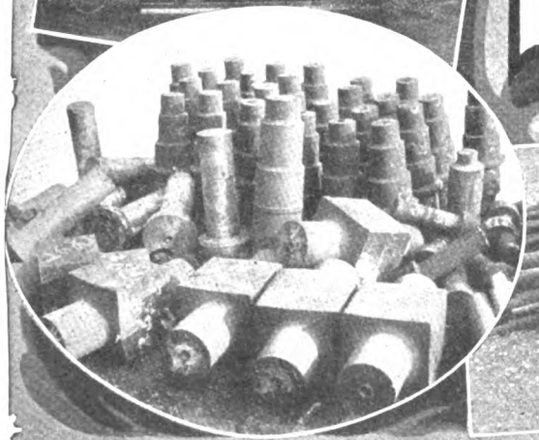
Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

CAMDEN



We Make
Many Types of
CAMDEN FORGINGS

to meet the requirements of many industries.

Our Buyers' Memo. will help to recall in part the diversity of our product.

BUYERS' MEMO.

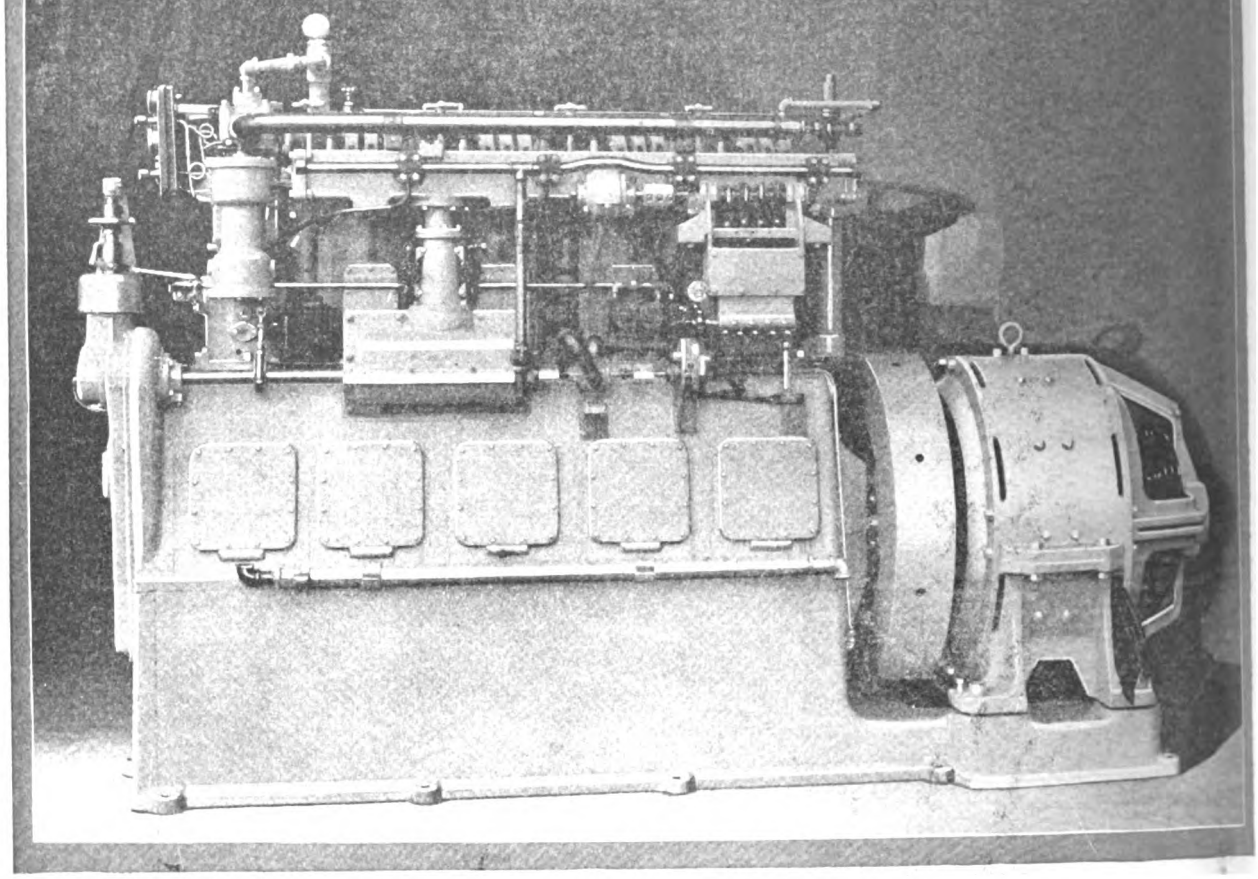
- Hammered Iron Bars for locomotive repairs
- Marine Shaft
- Marine Connecting and Eccentric Rods
- Rolls: Bending, Feed, Straightening, Embossing
- Large Wrenches
- Saw Arbors
- Rudder Stocks
- Cam Shafts
- Generator Shafts
- Eccentric Shafts
- Crusher Shafts
- Gear and Pinion Blanks
- Locomotive: Side and Main Rods, Crank Pins, Axles, Rod Straps, Guides, Parts of frame both in iron and steel, Piston Rods
- High and Low Carbon Bars
- Press Columns and Rams
- Pull Back Cylinders
- Water Cylinders
- Valve Bodies
- Plungers
- Weldless Steel Rings
- Lathe Spindles, solid and hollow bored
- Long Feed Screws
- Power Press Crank Shafts
- Rudder Arms
- Steam Engine Forgings
- Pump Crank Shafts
- Pump Connecting Rods
- Large Nuts
- Turbine Shafts
- Mill Shafting
- Trolley Car Axles
- Electric Motor Axles

Any forging to your print, and specifications, in either iron or steel.

CAMDEN FORGE CO.
CAMDEN, N. J., U. S. A.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Winton



Winton Auxiliary Motorship Equipment

WINTON Engine Works not only build the main power plants, but are in a position to supply the necessary Auxiliary Equipment to go with them.

The Auxiliary Equipment illustrated above is a typical example of the detailed manner in which this phase of Motorship Power Installation has been thought out and worked out by our Engineering Department.

A Model W-43 Winton Oil Engine is here shown direct connected to a 50 K. W. Generator to supply electric Power for lighting, wireless sets, electric steering apparatus, electric hoists, etc.

It is a self contained unit, quick staritng.

Write for Bulletins describing both Marine and Stationary Winton Oil Engines

Winton Engine Works

Cleveland, Ohio, U. S. A.

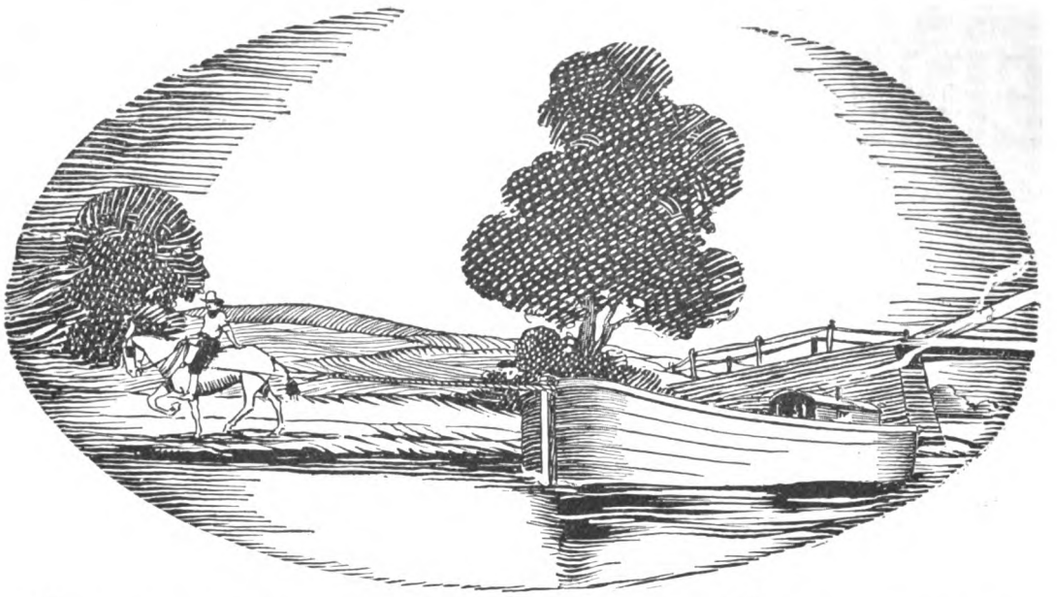
Eastern Office: 1778 Broadway, New York City

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



"CLINTON'S DITCH" THEY CALLED IT

THE crazy notion of a visionary man. But De Witt Clinton had faith—faith that the Erie Canal would open up to America and the world the untold riches of the middle west, and on October 26, 1828, the first boat arrived at Albany.

Beside the little stream at Plymouth the wheels hummed in the rope walk (then four years old) as the fiber was spun into yarn and the yarns twisted into tow lines for use on the canal, and hawsers and rigging for the merchant marine which was to help open to the world the great riches of America.

Plymouth was good rope then, it is good rope now. It is the rope you can trust.

PLYMOUTH ROPE

PLYMOUTH CORDAGE COMPANY
North Plymouth, Mass. Welland, Canada

No. 4

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HEINE MARINE BOILERS

are designed for long life and ease of maintenance. Now that the ships built by the Government must be operated under peace-time conditions, these qualities are more essential than ever.

HEINE MARINE BOILER AND MARINE SUPERHEATER
The seven groups of superheater tubes are shown connected to a collector, which in turn is connected by piping to the boiler shell.

Heine Boilers, after thousands of miles service in the ships of the new American merchant marine, have received the most enthusiastic praise from the operating personnel.

The construction of Heine Marine Boilers is described in a new treatise "Marine Boiler Logic," which also gives the latest methods of designing power plants for marine cargo carriers. Send for your copy.

HEINE SAFETY BOILER CO.

5322 Marcus Ave.
ST. LOUIS, MO.

49

Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Why Use Makeshifts?

WHY waste time and energy with makeshift devices for boring tool operations when William's "Agrippa" Adjustable Boring-Tool Posts offer convenience and efficiency developed to the *finest* power.

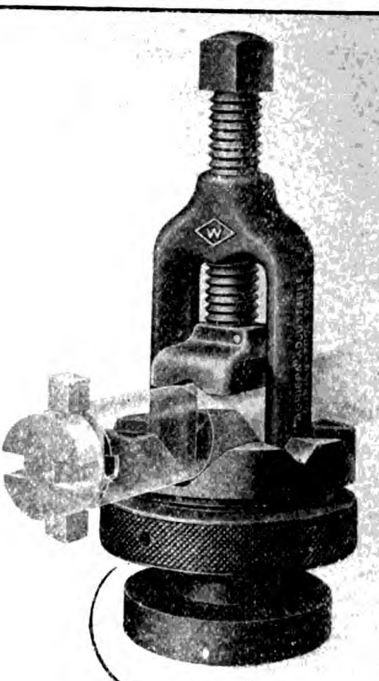
Each Post accommodates Bars in a wide range of sizes.

The height of the Bar is readily adjusted—a turn of the Knurled Ring will raise or lower the base on which the Bar rests.

The whole device is instantly locked in an immovable grip by merely tightening the Set Screw.

The Post and parts are made from a specially selected grade of stiff, tough steel, and are so heat treated and hardened as to develop its maximum strength and wearing qualities.

Four sizes for ½ to 2¼" diameter Bars—furnished with or without Bars. Ask for your copy of our new catalog.



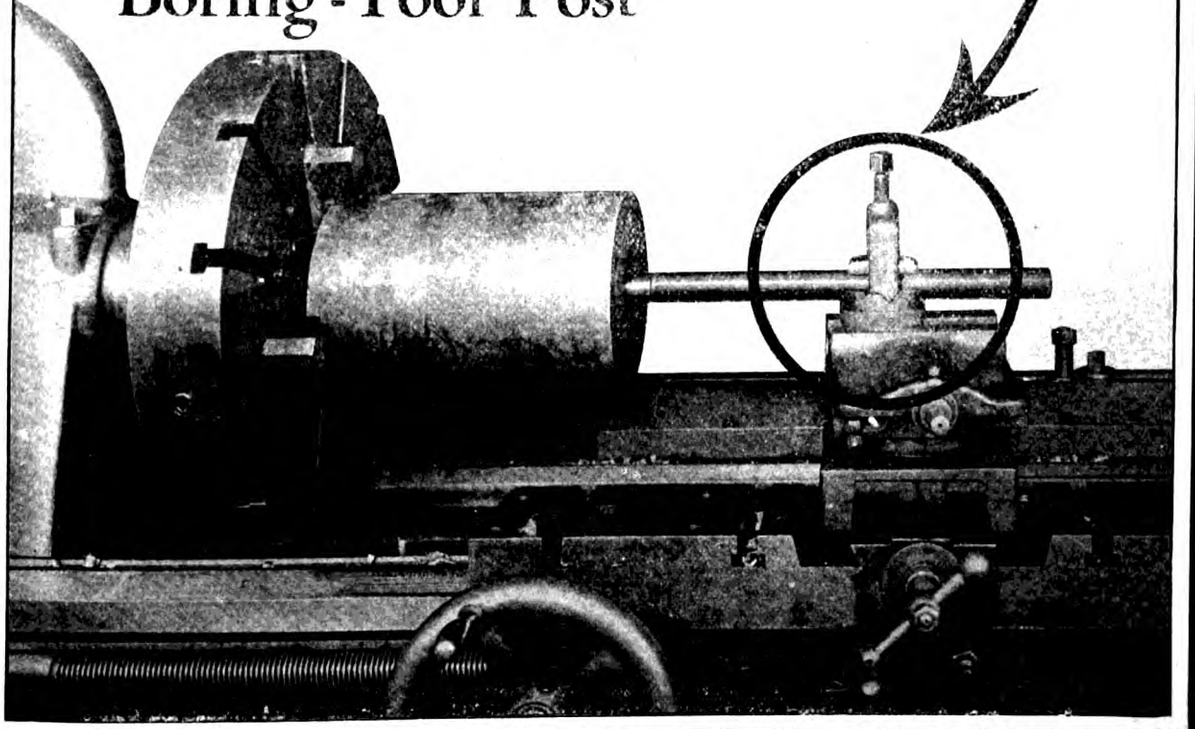
J. H. Williams & Co.

"The Drop-Forging People"

63 So. Clinton St. Chicago, Ill. | 142 Vulcan St. Buffalo, N. Y. | 142 Richards St. Brooklyn, N. Y.

Hereafter our Buffalo Works will care for all business, both catalog goods and made-to-order forgings, in the following territory; Western New York, Western Pennsylvania, Ohio, Michigan, Indiana, Illinois, Wisconsin, Missouri, Kansas and Nebraska. Considerable time will be saved if correspondence from these localities is directed to BUFFALO instead of to Brooklyn.

Williams' "Agrippa" Adjustable Boring-Tool Post



When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

BENJAMIN

Marine Lighting & Signaling Apparatus

Standardized Interchangeable

Water Tight Reflector Fixtures

Benjamin Water Tight Reflector Fixtures are furnished with heavy cast-iron hood and *one-piece steel reflector* finished in white porcelain enamel.

Made tight with two gaskets. *Copper holder* is *threaded* to receive heavy clear glass screw globe.

All material is selected and finish applied to meet marine requirements. Metal parts throughout are as completely resistant to corrosive influences as a commercial product can be made.

In Benjamin Marine Lighting and Signaling Apparatus, the line is complete from Water Tight Buzzers to Indicating Pilot House Panel Boards. Illustrated catalogs gladly sent upon request.

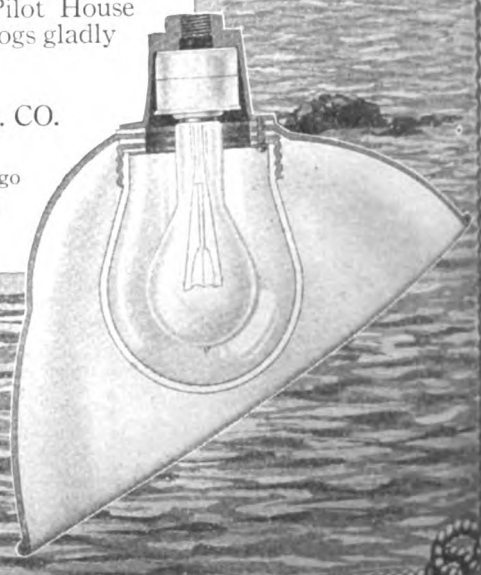
BENJAMIN ELECTRIC MFG. CO.

Sales and Distributing Offices:

806 West Washington Street, Chicago

247 West 17th Street, New York

590 Howard Street, San Francisco



Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TEXACO

Bunker Oils
Diesel Engine Fuel
Marine Lubricants

Adequate supplies and prompt delivery at the following Atlantic and Gulf Ports

TEXACO FUEL OIL STATIONS

Providence, R. I.	Charleston, S. C.	New Orleans, La.
New York, N. Y.	Savannah, Ga.	Gulfport, Miss.
Philadelphia, Pa.	Jacksonville, Fla.	Port Arthur, Tex.
Baltimore, Md.	Key West, Fla.	Galveston, Tex.
Norfolk, Va.	Tampa, Fla.	Port Aransas, Tex.
	Colon, C. Z.	

TEXACO MARINE LUBRICATING OILS

can be secured at the following ports

Rockland, Me.	Baltimore, Md.	Tampa, Fla.
Portland, Me.	Newport News, Va.	Pensacola, Fla.
Portsmouth, N. H.	Norfolk, Va.	Mobile, Ala.
Boston, Mass.	Wilmington, Del.	New Orleans, La.
Providence, R. I.	Charleston, S. C.	Gulfport, Miss.
New Bedford, Mass.	Savannah, Ga.	Port Arthur, Tex.
Newport, R. I.	Brunswick, Ga.	Galveston, Tex.
New London, Conn.	Jacksonville, Fla.	Houston, Tex.
New York, N. Y.	Key West, Fla.	Port Aransas, Tex.
Philadelphia, Pa.	Miami, Fla.	San Francisco, Cal.
	Colon, C. Z.	

Write for our pamphlet on Texaco Bunker Oils

It contains a map showing the location of our fuel and lubricating oil stations along with other valuable data. It is yours for the asking.

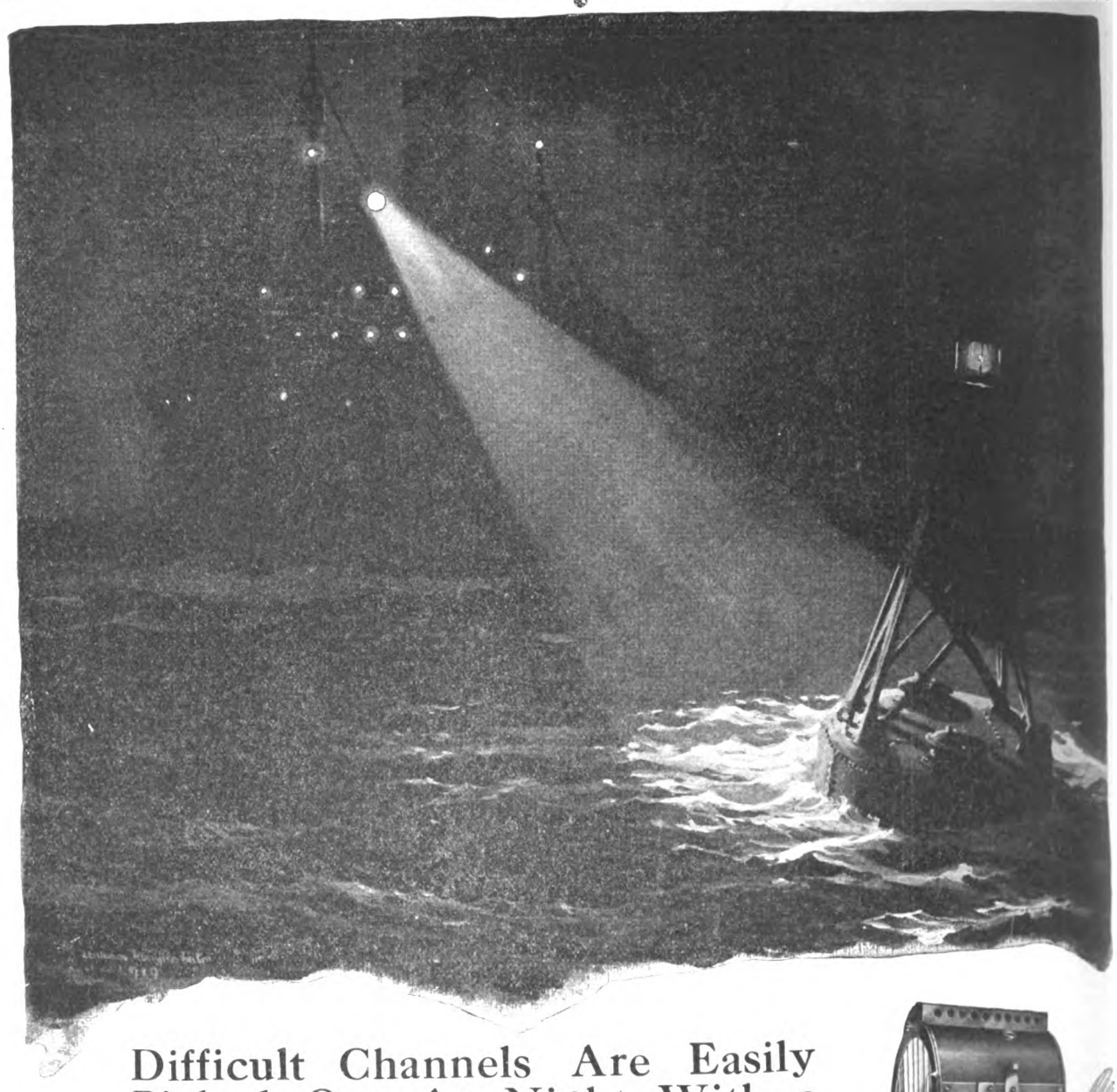
The Texas Company

Petroleum and Its Products

17 Battery Place, New York City

New York *Chicago* *Houston*

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Difficult Channels Are Easily Picked Out At Night With a Sperry Searchlight

A DARK night and a haze that hides the distant lights spell danger for the navigator.

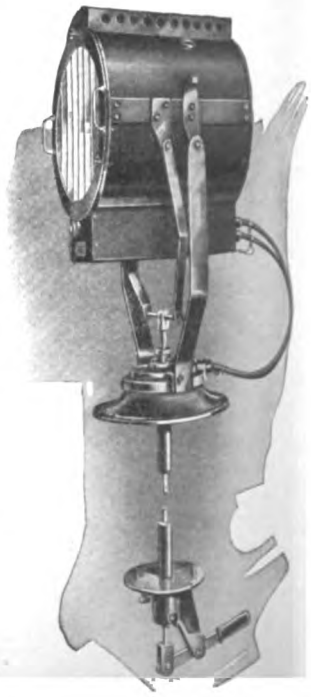
How many times has this or a combination of similar circumstances made you draw up alongside a buoy to see its name or number? How can you tell at night whether an unlighted buoy is red or black? Pass one of these on the wrong side—and the damage is done.

A powerful yet economical searchlight which does not need an expert operator will eliminate this danger.

The Sperry Searchlight has been developed with the idea of producing a far-reaching beam at a minimum cost with the greatest possible simplicity of operation.

These searchlights can be operated and cared for by anyone. No special training or experience on the part of the operator is required.

They are made in sizes suitable for use on any vessel.



Write for particulars

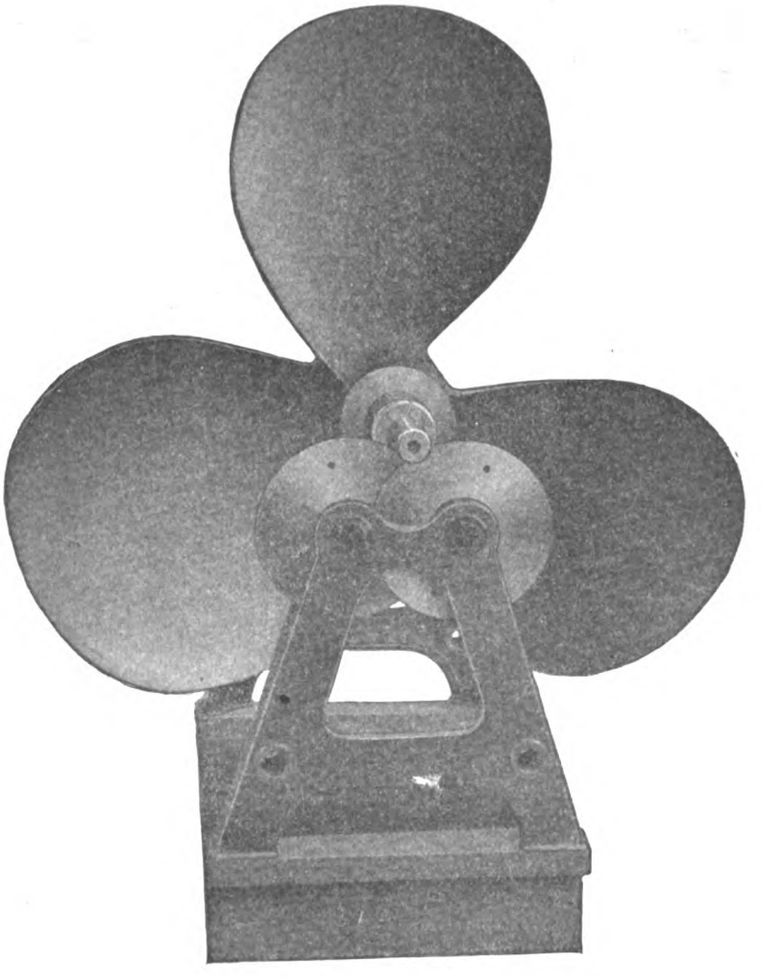
The Sperry Gyroscope Company

BROOKLYN, N. Y.

Great Lakes District Sales and Service Office
828 Guardian Building, Cleveland, Ohio

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

THACHER PROPELLERS



Thacher Patented Process Wheels Balance Perfectly

This wheel has not been touched except for boring
and the above test proves it to be in perfect balance

DYSON METHOD DESIGNS **THACHER PROPELLERS**

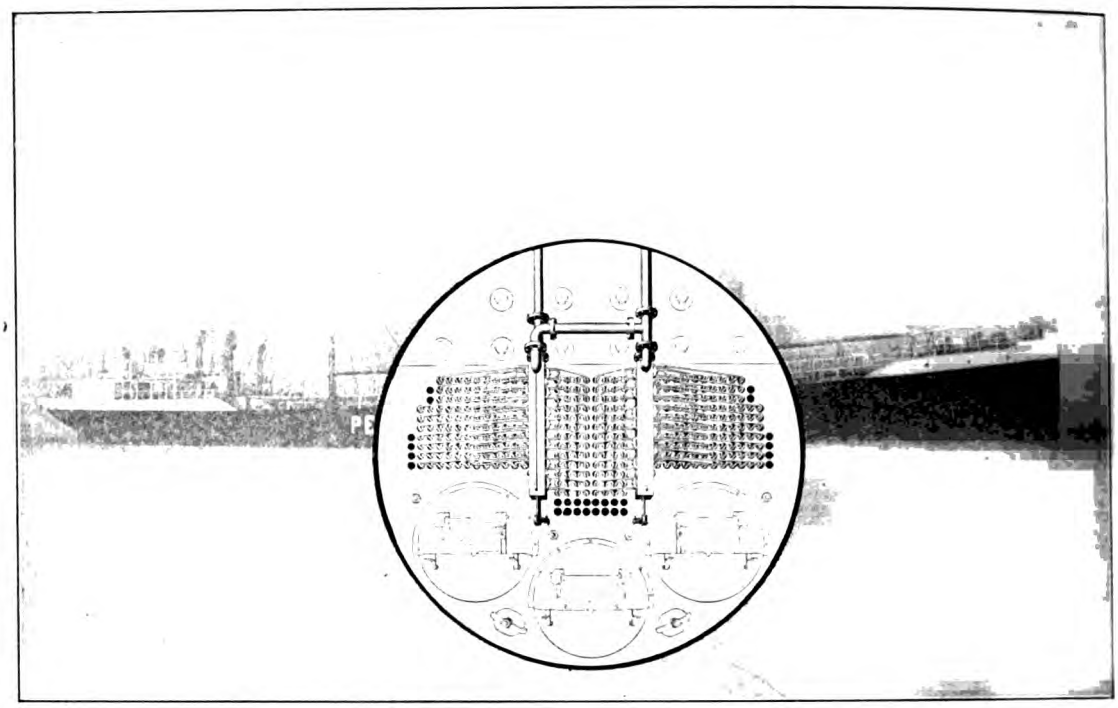
THACHER PROPELLER & FOUNDRY CORP.

THACHER STREET, ALBANY, N. Y.

OWNERS OF

American Screw Propeller Company of Philadelphia.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



SUPERHEAT and DRAFT

The fire-tube superheater offers no increased resistance to draft and necessitates no increased air pressure. Being in the hot gas path, it presents less than one-half the amount of surface to the current of gases than do waste gas type superheaters. Its surfaces are smooth and offer no lodging place for soot and cinders.

The uptake is not obstructed. Flues are blown as easily and in exactly the same manner as in non-superheater boilers. The fire-tube superheater introduces no difficult operating problems and it's location in the hot gas path instead of in low temperature waste gases insures constant dependable superheat and avoids deterioration from corrosion.

The result—a fuel saving of from 12 to 20%.

More than 1,800 vessels are proving these statements every day.

LOCOMOTIVE SUPERHEATER COMPANY

MARINE SUPERHEATERS

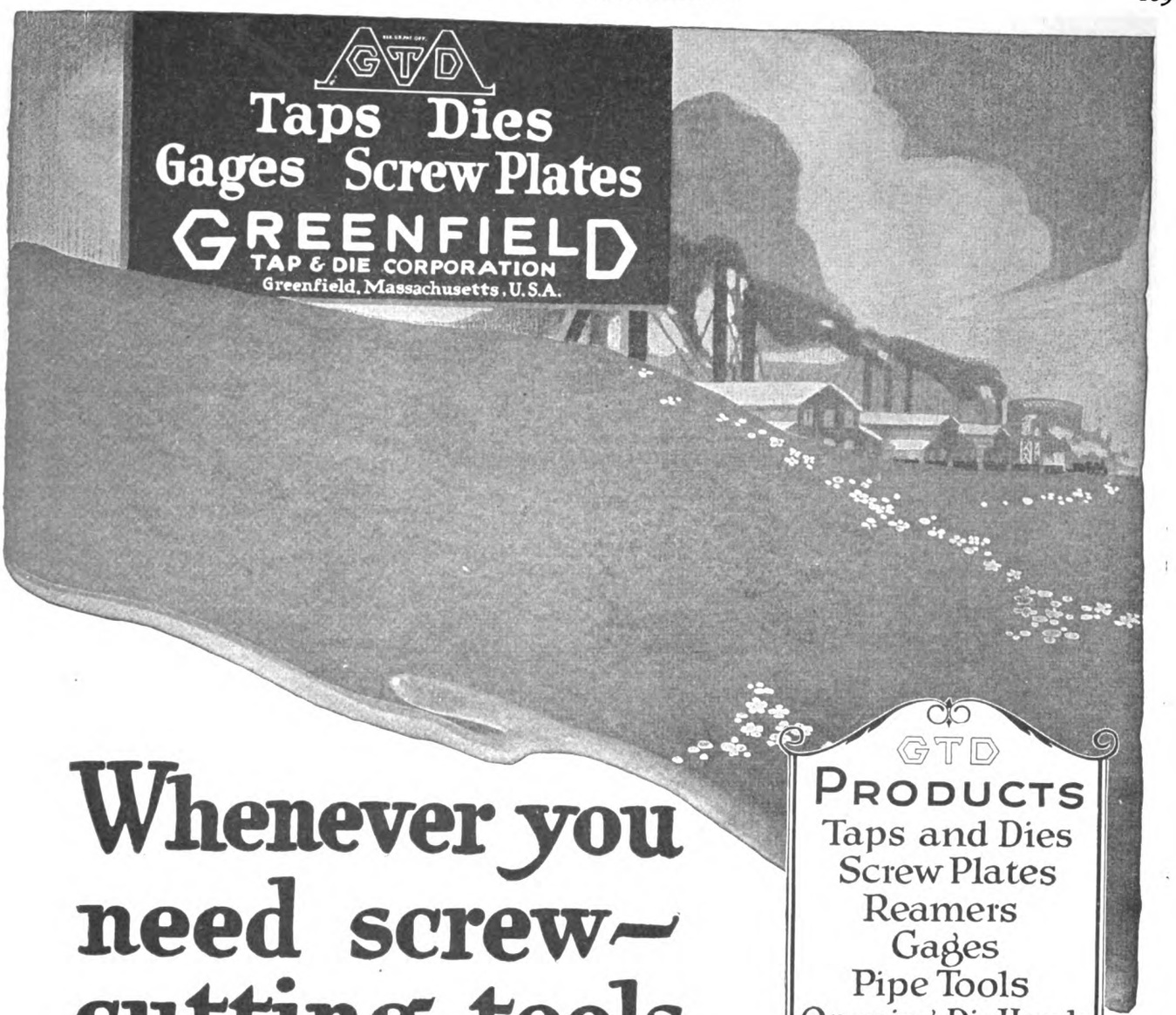
New York Chicago

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Whenever you need screw-cutting tools remember this trade-mark

GTD
PRODUCTS
Taps and Dies
Screw Plates
Reamers
Gages
Pipe Tools
Opening Die Heads
Machine Tools
Threading Machines
Lathes & Screw Machines
Grinding Machines
Cutting Off Machines
Saw Sharpeners
GTD

REG. U. S. PAT. OFF.
GTD

Our Catalogs contain full information concerning the above. Copies will be gladly mailed without cost.

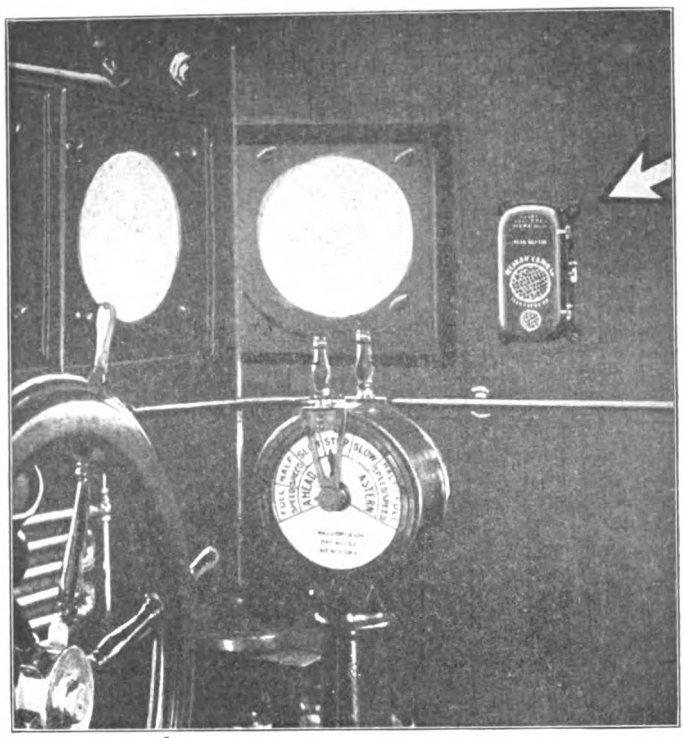
GREENFIELD
TAP & DIE CORPORATION
Greenfield, Massachusetts, U.S.A.
World's Largest Manufacturers of Screw Cutting Tools

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:08 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN



Klaxophone, the Loud Speaking Telephone, in the wheelhouse of the U. S. S. Panama.

IMMEDIATE DELIVERIES IF DESIRED

KLAXOPHONE

The Loud Speaking Telephone

YOU can install a Klaxophone equipment (Klaxon-Stentor Telephone) in a fraction of the time required for a voice tube installation. Even if a ship can stay in port only a day or two there is always time enough to equip it with Klaxophones. And if a ship stayed in port a month---you could not equip it with a quicker, safer or more reliable means of communication.

KLAXON COMPANY

INDUSTRIAL DIVISION

Intercommunication and Signal Engineers

METROPOLITAN TOWER NEW YORK, N. Y.

K-105

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Safest Way To Buy Bolts and Nuts

All makes of bolts and nuts may look equally good, if heaped together in a tote box. But there can be all the difference in the world in the way they perform their office.

When nuts and bolts work loose, fracture, strip their threads—there is more at stake than the cost of replacing them.

In the service given by these little pieces of metal you can see the wide variation in methods of manufacture.

This company was the pioneer maker of cold punched steel nuts and cold headed bolts. Since 1845 it has held the leadership in one of the world's most vital industries. In this time we have developed manufacturing facilities which have no duplicate in any other plant.

Empire Bolts and Nuts are used by every navy yard in the country, practically all the big shipbuilders, the aircraft board, quartermaster's department—wherever thoroughgoing quality is demanded.

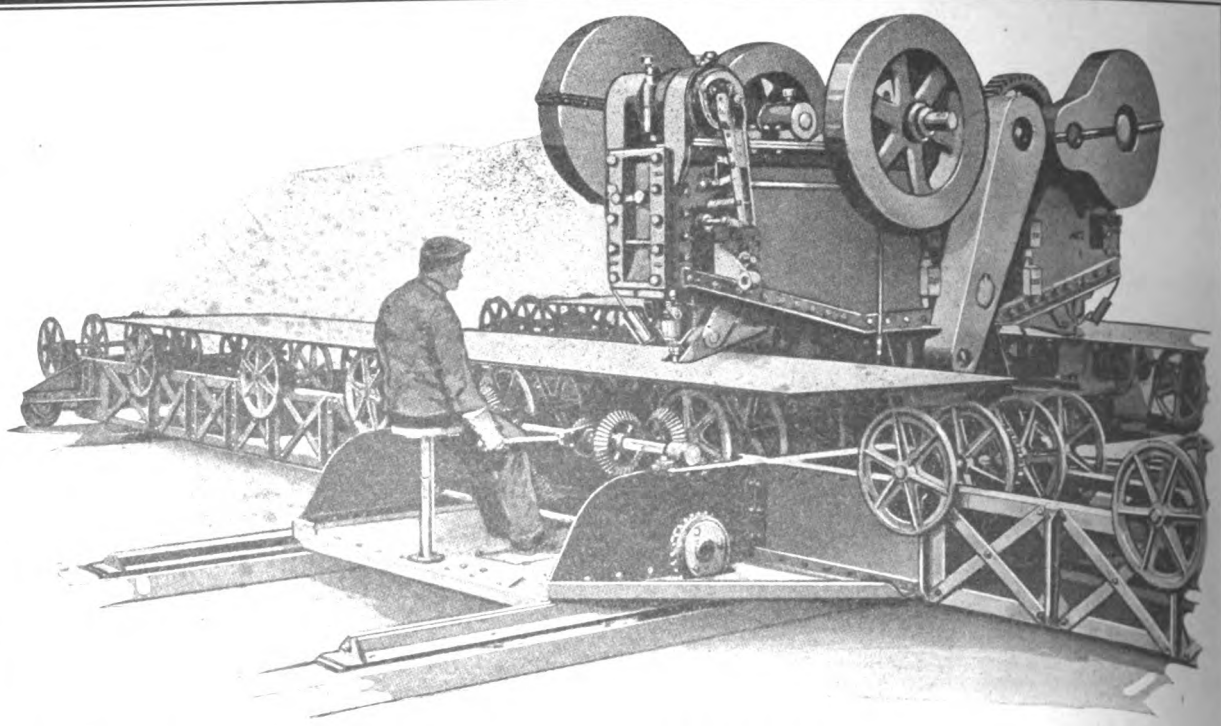
Know from whom you are buying—no other way is safe. And bear this in mind—every Empire Bolt and Nut is **guaranteed.**

RUSSELL, BURDSALL & WARD BOLT & NUT COMPANY

PEMBERWICK, CONN PORT CHESTER, NEW YORK ROCK FALLS, ILLINOIS

Makers of Bolts, Nuts and Rivets Since 1845

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



The Lysholm Patented Plate Punch Table

Punching 4000 Holes Per Day in Steel Plates.

Rapid production in punching holes in boiler plate is made possible on this machine by means of a roller table. Lateral and sidewise movements are under the lever control of the operator. ¶The tables are built with roller bearings to facilitate rapid movement of the work. ¶Plates up to 30 ft. x 8 ft. form ¼ in. to 1⅛ in. in thickness may be handled readily. ¶Various shipyards and plate shops have reported records that average 4000 holes per nine-hour day. 6700 holes in a nine-hour day is a common occurrence. Full information on request.

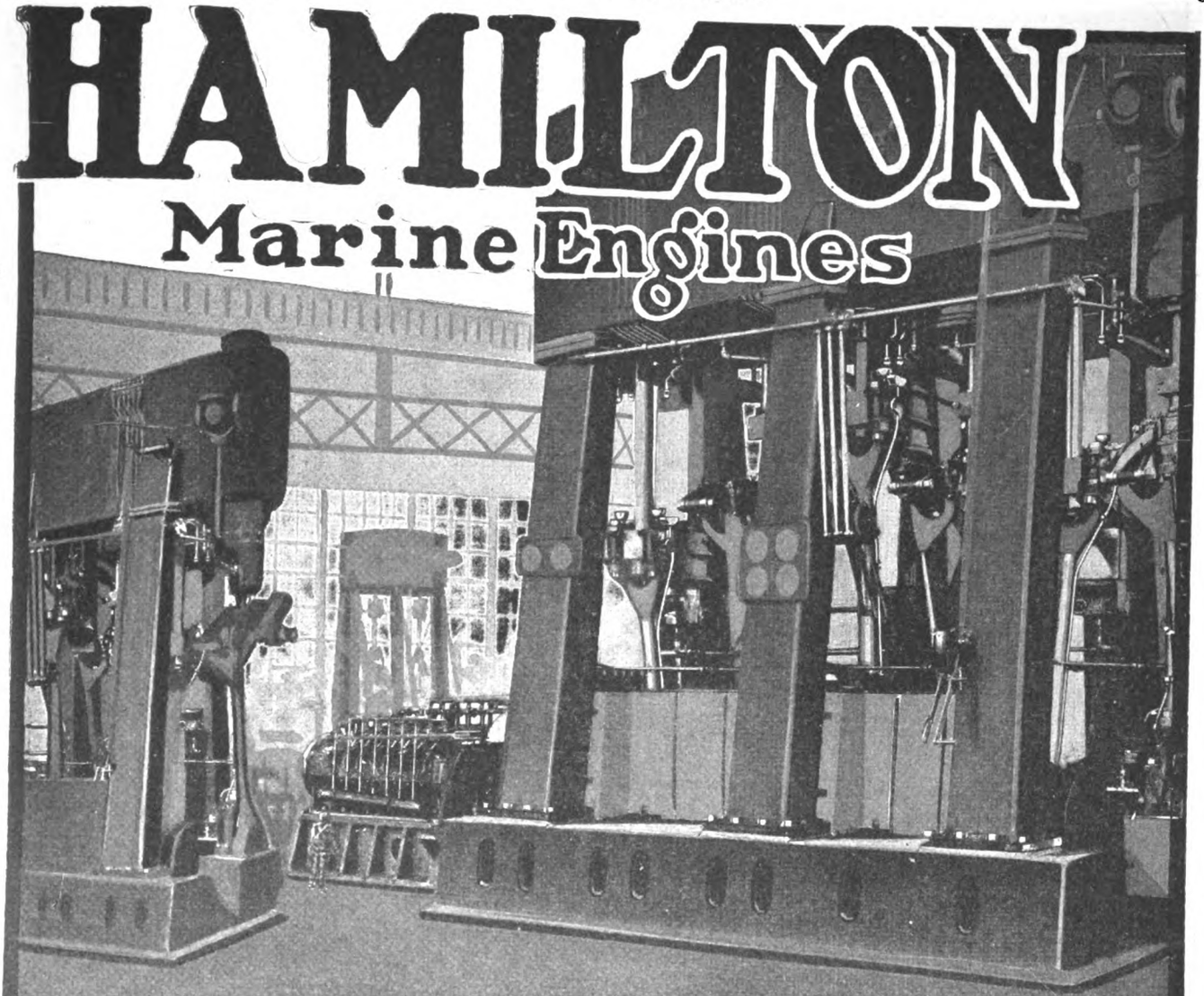
Companies Now Using or Having on Order Lysholm Plate Punch tables

American International Corp.	Hog Island, Phila., Pa.
The Atlantic Corporation	Portsmouth, N. H.
Atlantic Refining Co.	Philadelphia, Pa.
Balto. Dry Dock & Shipbuilding Co.	Baltimore, Md.
Bayles Shipyard, Inc.	Pt. Jeff., L.I., N.Y.
Bethlehem Steel Company	Sparrows Point, Md.
Birmingham Steel Corp.	Birmingham, Ala.
Bros Boiler & Mfg. Co., Wm.	Minneapolis, Minn.
The Brownell Co.	Dayton, Ohio
Camden Iron Works	Camden, N. J.
Carnegie Steel Co.	Waverly, N. J.
Carnegie Steel Co.	Balto., Md.
Carolina Shipbuilding Corp.	Wilmington, N. C.
Case Crane & Engineering Co.	Columbus, Ohio
Chandler & Taylor Co.	Indianapolis, Ind.
Chester Shipbuilding Co.	Chester, Pa.
Chickasaw Shipbuilding Co.	Mobile, Ala.
Coughlan & Sons, J.	Vancouver, B. C.
A. H. Cox & Co.	Seattle, Wash.
Dayton Steel Construction Co.	Dayton, Ohio
Detroit Shipbuilding Co.	Detroit, Mich.
Robert Dollar Co.	New York City
John Eichley, Jr., Co.	Pittsburgh, Pa.
Erickson Engineering Co.	Seattle, Wash.
Farrar & Trefts	Buffalo, N. Y.
Federal Shipbuilding Co.	New York, N. Y.
Foundation Co.	New Orleans, La.
Foundation Co.	Savannah, Ga.
Ferguson Steel & Iron Co.	Buffalo, N. Y.
Gem City Boiler Co.	Dayton, Ohio
Great Lakes Engineering Co.	Detroit, Mich.
Great Lakes Engineering Co.	Ashtabula, Ohio
Groton Iron Works	Groton, Conn.
Hammond Iron Works	Warren, Pa.
Hong Kong & Whampoa Dockyard Co.	Hong Kong, China
McAleenan Bros. Co.	Pittsburgh, Pa.
McClintic-Marshall Co.	Pittsburgh, Pa.
The Massillon Bridge & Struct.	Massillon, Ohio
Merchants Shipbuilding Co.	Bristol, Pa.
Merril-Stevens Co.	Jacksonville, Fla.
Mitsubishi Goshi Kaisha	Tokio, Japan
Morgan Engineering Co., The	Alliance, Ohio
Navy Yard	Brooklyn, N. Y.
New Jersey Shipbuilding Co.	Gloucester, N. J.
Newport News Shipbuilding Co.	Newport News, Va.
Newburgh Ship Yard	Newburgh, N. Y.
New York Shipbuilding Corp.	Camden, N. J.
Nitta Steamship Co.	Kobe, Japan
Norway Pacific Const. & Drydock Co.	Everett, Wash.
Osaka Iron Works	Tokio, Japan
Penn Bridge Co.	Beaver Falls, Pa.
Pennsylvania Engineering Wks.	New Castle, Pa.
Pennsylvania Shipbuilding Co.	Gloucester, N. J.
Pennsylvania Steel Export Co.	Philadelphia, Pa.
Pittsburgh-Des Moines Steel Co.	Pittsburgh, Pa.
Pressed Steel Car Co.	Pittsburgh, Pa.
Petroleum Iron Works, of Ohio	Sharon, Pa.
Pusey & Jones Company	Wilmington, Del.
Ralston Steel Car Co.	Columbus, Ohio
The Reeves Bros. Co.	Alliance, Ohio
Riter-Conley Mfg. Co.	Pittsburgh, Pa.
Standard Car Construction Co.	Sharon, Pa.
Standard Steel Car Co.	Butler, Pa.
G. M. Standifer Const. Co.	Vancouver, Wash.
Sun Shipbuilding Co.	Chester, Pa.
Suzuki & Co.	Kobe, Japan
Tennessee Coal, Iron & R. R. Co.	Birmingham, Ala.
Toledo Shipbuilding Co.	Toledo, Ohio
Vincennes Bridge Co.	Vincennes, Ind.
Virginia Bridge & Iron Co.	Roanoke, Va.
Virginia Shipbuilding Corp.	Alexandria, Va.
Wallace Shipyard	No. Vancouver, B. C.
Wellman-Seaver-Morgan Co.	Cleveland, Ohio
Western Steel Car & Fdry. Co.	Pittsburgh, Pa.

MANUFACTURED BY **THE NORBOM ENGINEERING CO., DARBY, PENNA.**

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HAMILTON
Marine Engines



America's Merchant Marine

Yesterday it did not exist—today, thanks to multiple production, the great marine units necessary to solve the problems of the war—and to reach out for the world's commerce have been built.

The world wide trade opportunities that follow the war depend upon a merchant marine that can compete with all other shipping.

An essential factor in the development of this great commerce carrying fleet is the multiple production of marine engines.

And it is a matter of considerable pride to us that we are privileged to play a part in this important work.

We are building marine engines in sizes from 750 to 2800 horse power—which by the actual test of use have proved their efficiency, their economy and their thorough dependability.

Write Us Your Requirements and We Will Be Glad to Furnish Quotations

THE HOOVEN, OWENS, RENTSCHLER COMPANY

Producers of Prime-Movers for All Industries
HAMILTON.

Offices Located In All Important Cities
OHIO. U. S. A

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

No Kinks — No Delays More Production

Goodrich Pneumatic Hose for air drills insures uninterupted service, uniform pressure and long wear. It will neither kink nor leak.

In every ship-yard and on every vessel where the best in equipment is the rule, you'll find Goodrich Marine Hose. By actual test it has proven up to the most severe marine requirements.

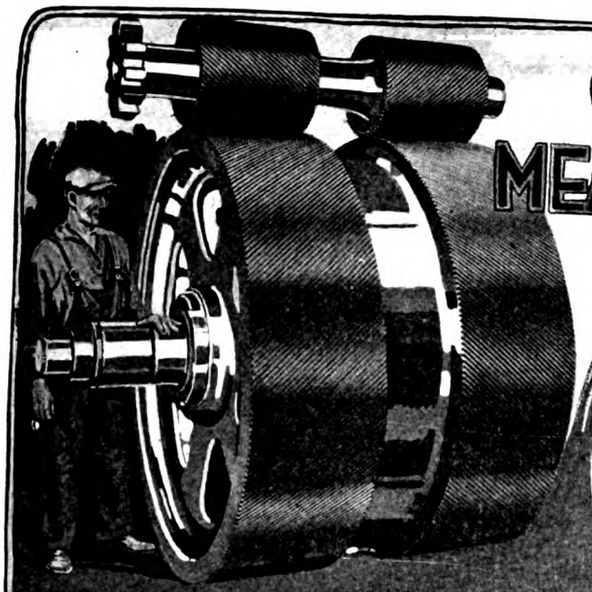
Use Goodrich Pneumatic Hose on your air drills; Goodrich Boiler Washout Hose for boiler cleaning, and Goodrich Deck Hose for keeping things ship-shape. They're all good because fifty years of rubber knowledge is built into them.

THE B. F. GOODRICH RUBBER COMPANY
The City of Goodrich—AKRON, OHIO

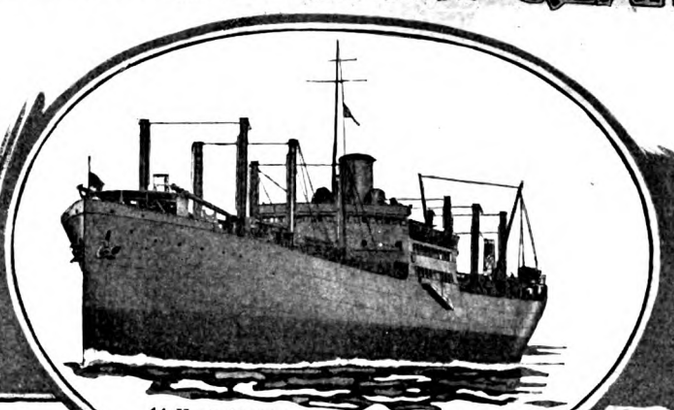
GOODRICH MARINE HOSE

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:18 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



QUIET OPERATION MEANS EFFICIENT GEARS



14 Knot, 12,000 ton boat equipped with De Laval geared turbines

The vessel shown above is one of the group { SOUTH BEND, MARICA, SOL NAVIS, EDELLYN } of 12,000-ton twin-screw, 14 knot sister ships each of which is equipped with two 2500-HP. De Laval compound marine turbines driving the propellers through single gear reductions.

All of these vessels are in the transport service and the operation of the De Laval geared turbines has been characterised by high efficiency and exceedingly quiet operation.

Quiet operation of reduction gears is a point that is receiving more and more consideration from shipbuilders as quietness of operation means that the gears are correctly designed, correctly cut and correctly supported.

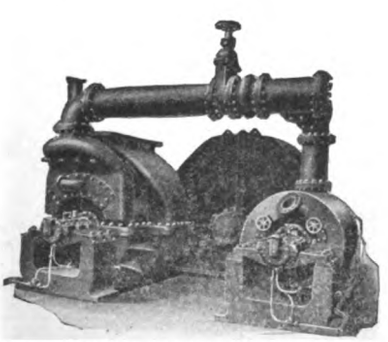
Noise in gears is also a serious fault from the operator's standpoint as noisy gears cause great inconvenience to the operating crews and make it very difficult to detect troubles that may occur in various parts of the engine room with auxiliaries which would be instantly noted if the gears operated quietly.

Either the high pressure or the low pressure element of each of the compound units described above can be operated upon high pressure steam and the vessel can be propelled by any one of the four turbines alone.

The combination of high and low pressure turbines also renders the unit suitable for high boiler pressure and high vacuum, which is conducive to high efficiency.

All parts of the turbine are easily accessible. Due to the absence of reciprocating and rubbing parts, packings, complicated valve gears, etc., comparatively little attention is required.

Let us give you the names of many other vessels equipped with De Laval gears. After investigation you will chose De Laval gears for your own boats. Ask for Special Publication No. 46.



De Laval 2500.HP. high and low pressure, two-pinion geared turbine. Propeller speed 110-RPM.

De Laval Steam Turbine Co.

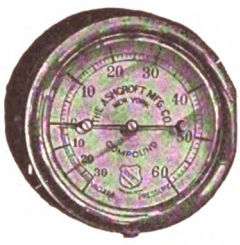
400 Nottingham Way TRENTON, N. J.

94

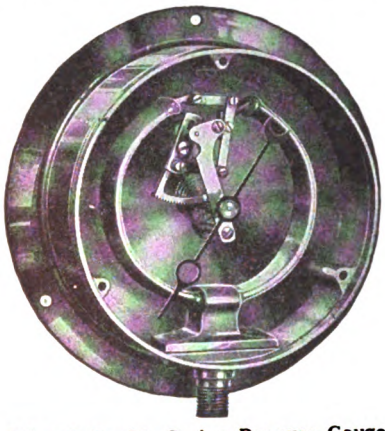
Generated on 2024-09-12 08:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ASHCROFT GAUGES

All Sizes



Ashcroft Iron or Brass Case Compound Gauge



Ashcroft Double Spring Pressure Gauge with Hard Geared Bushed Movement

All Sizes

Ashcroft Iron or Brass Case Hydraulic Gauge with tool steel spring

More Ashcroft Gauges are being installed on ships now building, than all other makes put together.

On battleships, destroyers, submarines, colliers, tankers, freighters, passenger ships—that is where Ashcroft gauges have been used for years, and where they are being used now.

The Ashcroft trade-mark on a gauge means that that gauge is properly designed—properly calibrated and what is equally important, is constructed of materials which long experience has proved will stand severe service.

The double spring pressure gauge shown on this page is particularly adapted for marine work. The double spring tends to minimize excessive movement of the hand, due to vibration and the heavy marine type movement will last for years even under severe service, without undue wear.

Ashcroft Gauges represent the best that it is now possible to build.

If it is ever possible to build better gauges, Ashcroft will be one of the first to do so.

Specify ASHCROFT GAUGES and see that you get them.

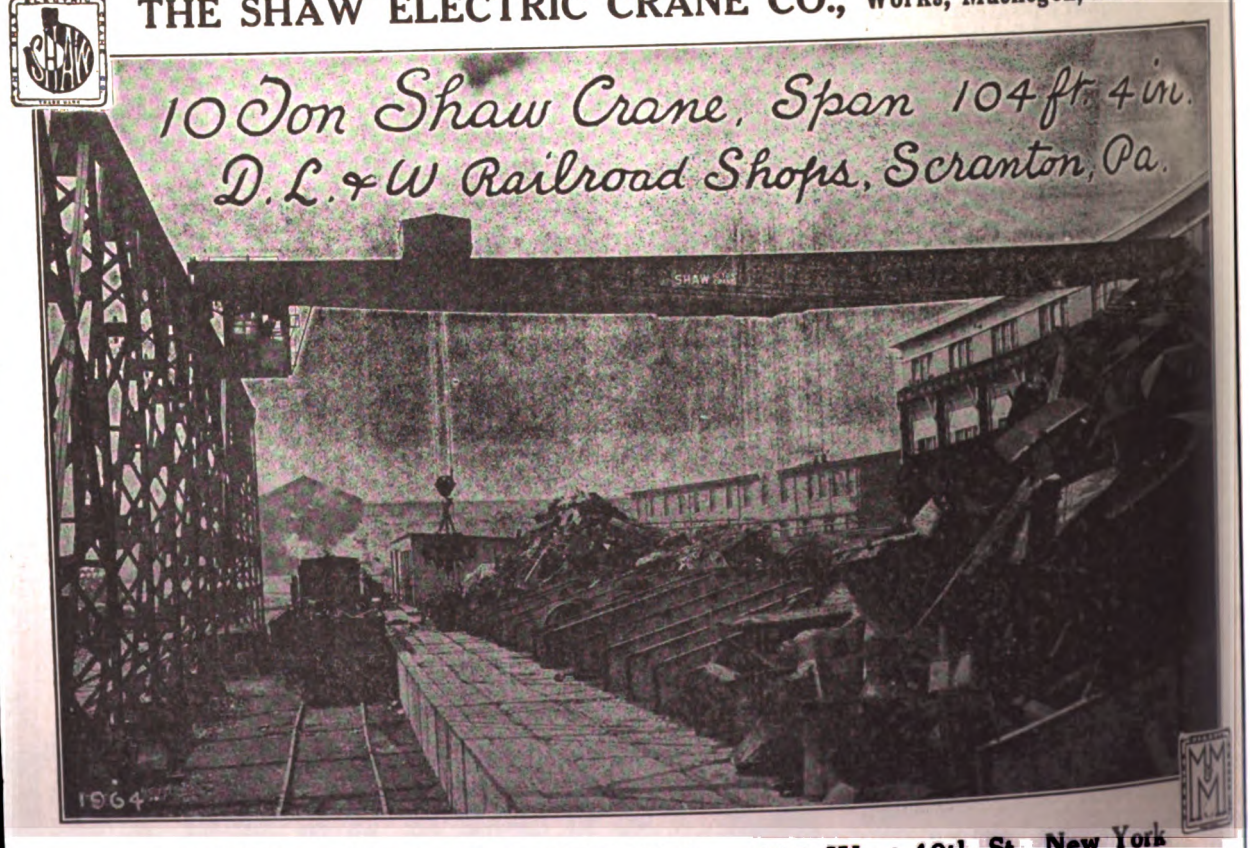
THE ASHCROFT MANUFACTURING CO.

119 West 40th Street
NEW YORK

Rice Building
BOSTON

29 No. Jefferson Street
CHICAGO

THE SHAW ELECTRIC CRANE CO., Works, Muskegon, Mich.



MANNING, MAXWELL & MOORE, Inc., 119 West 40th St., New York

SALES OFFICES IN ALL PRINCIPAL CITIES

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

YARROW & CO., LTD.

of GLASGOW (Formerly of POPLAR, LONDON)

builders of

Fast Passenger and Commercial Steamers, Shallow Draught Vessels, Tugs, &c.,

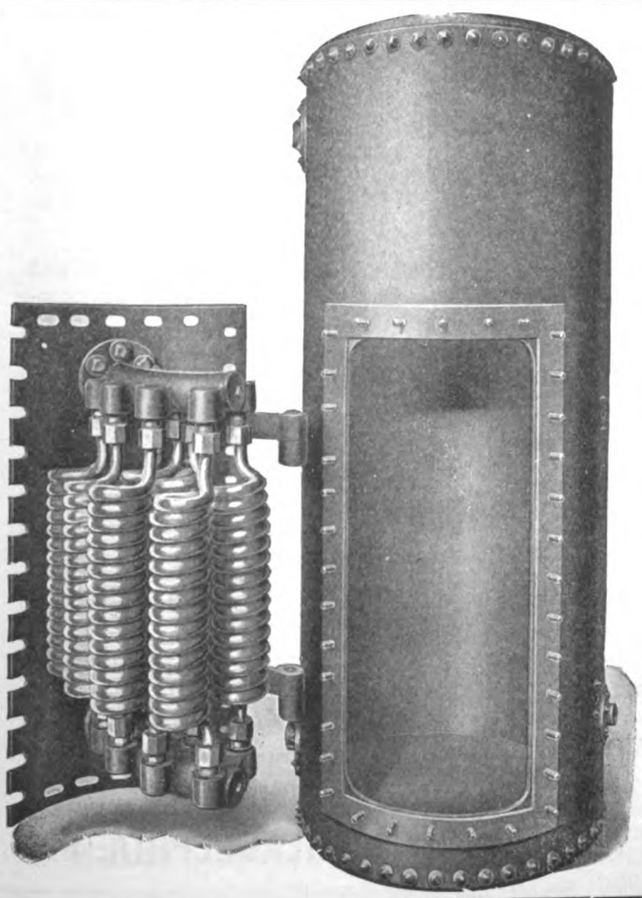
propelled by

STERN WHEELS, SIDE WHEELS, or SCREWS WORKING IN TUNNELS FITTED WITH YARROW'S PATENT HINGED FLAP.

YARROWS, LTD.

of VICTORIA, British Columbia,

Shipbuilders, Ship Repairers and Engineers, are associated with YARROW & CO., Ltd., GLASGOW.



R. & D. PARACOIL EVAPORATOR

and Distilling Condensers are made for both single and multiple-effect plants in marine service.

Constructed with cast iron or steel plate shells of all capacities up to 50 tons per 24 hours per unit.

Improved cleaning facilities make maintenance expenses low.

Write for catalog and full information.

ROW & DAVIS, ENGINEERS, INC.

Feed Water Heaters, Evaporators, Distillers, Ash Ejectors, Feed Water Filters, Grease Extractors, Condensers. Consulting and Contracting Engineers.

90 West Street, New York, U. S. A.

Cable Address: Roviseng, New York

Seattle, Wash. Vickers & Co.

22

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

In nearly every instance when there is an accident or mishap to a vessel, or a wreck caused by wave, storm or fire, good photographs are taken.

Or it may be that unusual repair jobs of some sort have attracted the photographer.

Such pictures are usually valuable, as well as instructive, as they illustrate the vicissitudes and chances of life at sea; or perhaps bring out some important point in the manner of salving a vessel or making repairs.

WE WANT PHOTOGRAPHS

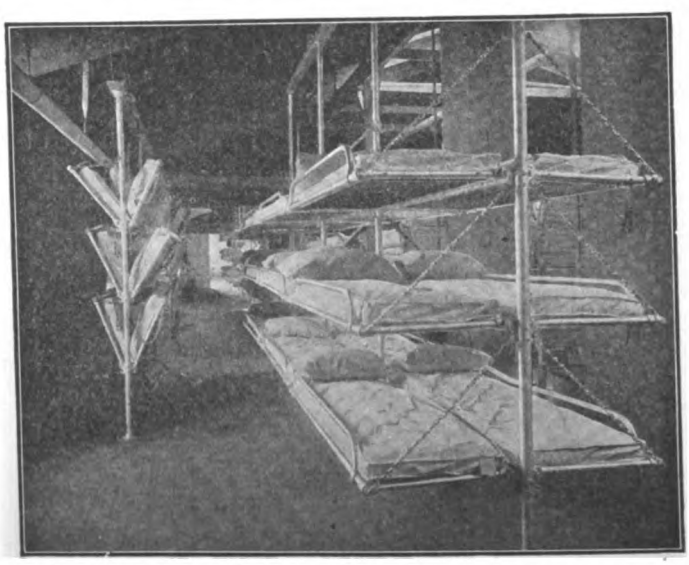
of this kind for publication, especially when there is complete descriptive matter accompanying them. We will pay good prices for the pictures and descriptions whenever they are suitable to our needs. The pictures should be permanent prints carefully made.

INTERNATIONAL MARINE ENGINEERING

6 EAST 39th STREET, NEW YORK

8 BOUVERIE STREET, LONDON, E. C.

BERNSTEIN METAL BERTHS



Bernstein No. 5550 Folding Berth, installed on U.S.S. "Newark," Providence Harbor.

"STANDEE BERTHS ONE OF OUR SPECIALTIES." We have built them in quantities for the largest shipbuilders in the U. S.

Manufactured in their entirety in a plant which is one of the oldest, largest and best equipped metallic bed and bedding factories in the country.

A complete practical and efficient line is offered. "A berth to successfully meet every condition on board ship." Also brass and iron beds, mattresses and pillows.

We describe them fully in a catalog which should be on your files. WRITE FOR IT — SPECIFYING CATALOG NO. 17.

One of the distinctive features of our No. 5550 Folding Berth. The berth cannot work out of the supporting socket.

Bernstein MANUFACTURING COMPANY DEPT. C., 3rd and Allegheny Ave., PHILADELPHIA, PA.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

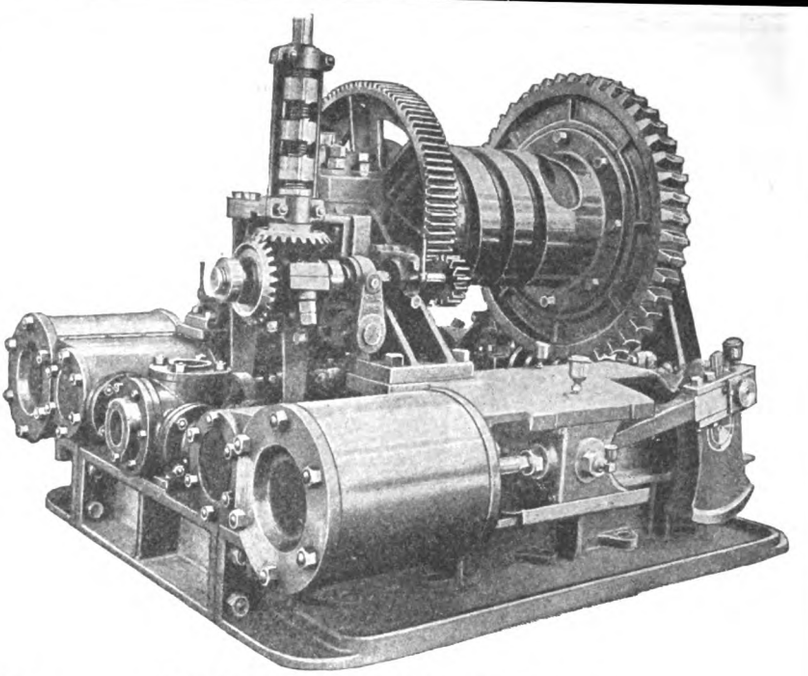
MUNDY

Deck Auxiliaries

Steering Engines
Windlasses
Cargo Winches
Capstans
Ash Hoists

Dependable—Economical
Ready for Hard Service

WE WANT YOUR SPECIFICATIONS

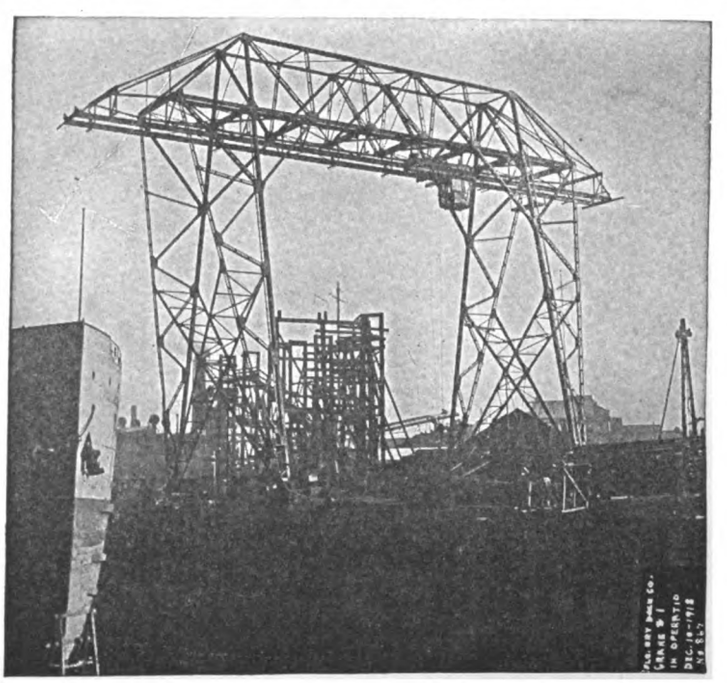


THE MUNDY STEAM ONLY STEERING ENGINE

J. S. MUNDY HOISTING ENGINE CO.

Engineers and Manufacturers NEWARK, N. J.

SHIPBUILDERS' GANTRY CRANES, ALSO ELECTRIC TRAVELING CRANES, JIB CRANES, STEEL DERRICKS AND MONORAIL HOISTS

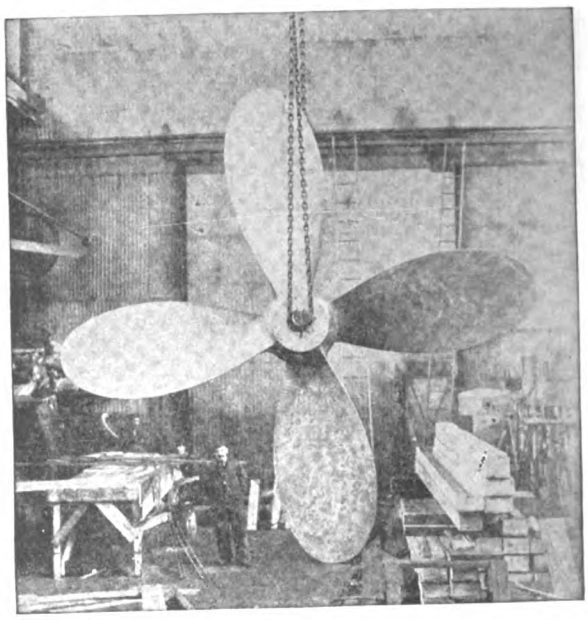


Shipbuilding Gantry Crane, 10-Ton capacity, built for Buffalo Dry Dock Co., Buffalo, N. Y.

LAKESIDE BRIDGE AND STEEL CO., 139 Villard Ave., North Milwaukee, Wis.

Generated on 2024-09-12 08:40 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HYDE



MANGANESE BRONZE

STANDARD FOR TWENTY YEARS FOR PROPELLERS

SOLID BRONZE PROPELLERS FROM 8 INCHES TO 20 FEET IN DIAMETER

BRONZE BLADES AND HUBS OF ANY SIZE

HYDE WINDLASS COMPANY, BATH, ME.

New York Representative, Kearfott Engineering Co., 95 Liberty St., New York

KINGSFORD

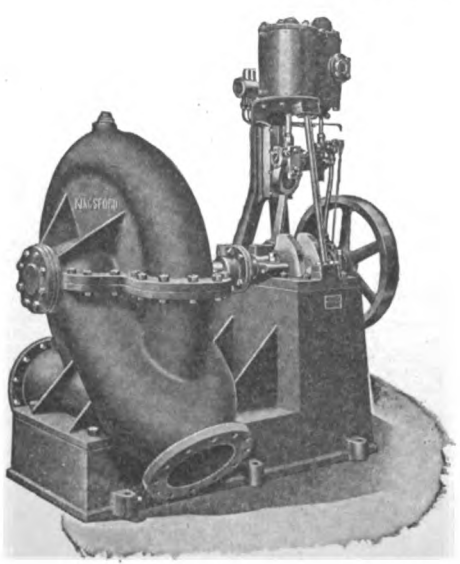


FIGURE 202

CIRCULATING PUMPS

are in use in all classes of Government and Merchant ships, as they have proven dependable units. We can meet your specifications.

Kingsford Foundry and Machine Works

Oswego, N. Y.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

HYDRAULIC MACHINERY

Hydraulic Pipe Bending Press
Hydraulic Beam Bending Presses
HYDRAULIC TOOLS FOR SHIPBUILDING
The WATSON-STILLMAN CO. NEW YORK

WRITE FOR OUR NEW CATALOG ON HYDRAULIC TOOLS FOR THE SHIPBUILDING INDUSTRY

It contains some interesting data about hydraulic machinery in general and ours in particular.

Benders, Shears, Forging Presses, Forcing Presses, Punches, Jacks, Accumulators, Pumps, etc.

In our experience of 70 years building hydraulic equipment, we have eliminated mistakes and have evolved a line of machinery to meet every need where hydraulic pressure is a possibility.

If your conditions are unusual, write to us and our engineers will adapt a standard design to suit or design new to meet your specifications.

Write for your copy today.

The Watson-Stillman Co.

Chicago McCormick Bldg. 36 Church Street, New York

MARINE FORCED DRAFT

Designers of Complete Forced Draft Installations for Marine Work

Plans, Specifications and Estimates Furnished

Manufacturers of RELIANCE Standard Interchangeable Furnace Fronts for Coal and Oil Fuel. Low Speed Radial Fans fitted with RELIANCE enclosed Forced Lubricated Engines. Retarders and minor fittings in all branches.

Large stocks carried of Standard Fronts, Fans and Engines ensuring quickest deliveries for emergency or repair work.

JOHN REID & CO.

HEAD OFFICE

Hudson Terminals, 30 Church St., New York

MONTREAL Board of Trade Bldg.

LONDON 4 Lloyds Ave., E.C.

GLASGOW 50 Wellington Street

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

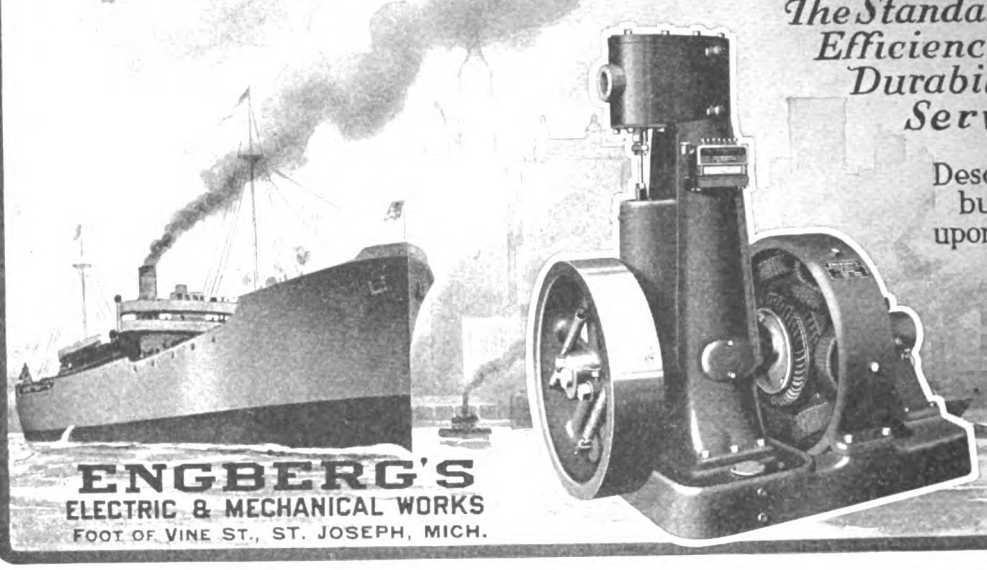
Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Engberg

MARINE LIGHTING SETS

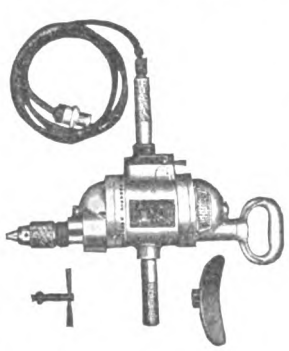
The Standard for Efficiency Durability Service

Descriptive bulletin upon request



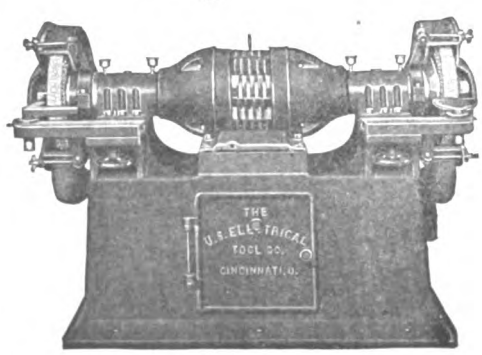
ENGBERG'S
ELECTRIC & MECHANICAL WORKS
FOOT OF VINE ST., ST. JOSEPH, MICH.

U. S. ELECTRIC DRILLS AND GRINDERS



U.S. ELECTRIC DRILLS AND REAMERS MADE FOR D. C. OR A. C. 110 VOLTS OR 220 VOLTS. ALSO UNIVERSAL MOTORS.

BALL BEARING USED.
GET CATALOGUE.



5 & 7½ H. P.
BALL-BEARING
GRINDERS
WESTINGHOUSE
MOTORS.
WHEELS
18 x 3 AND
24 x 4″

3 & 5 H. P.
GRINDERS
220 or 440
VOLT, A.C. OR D.C.
WHEELS
12 x 2″
18 x 3″

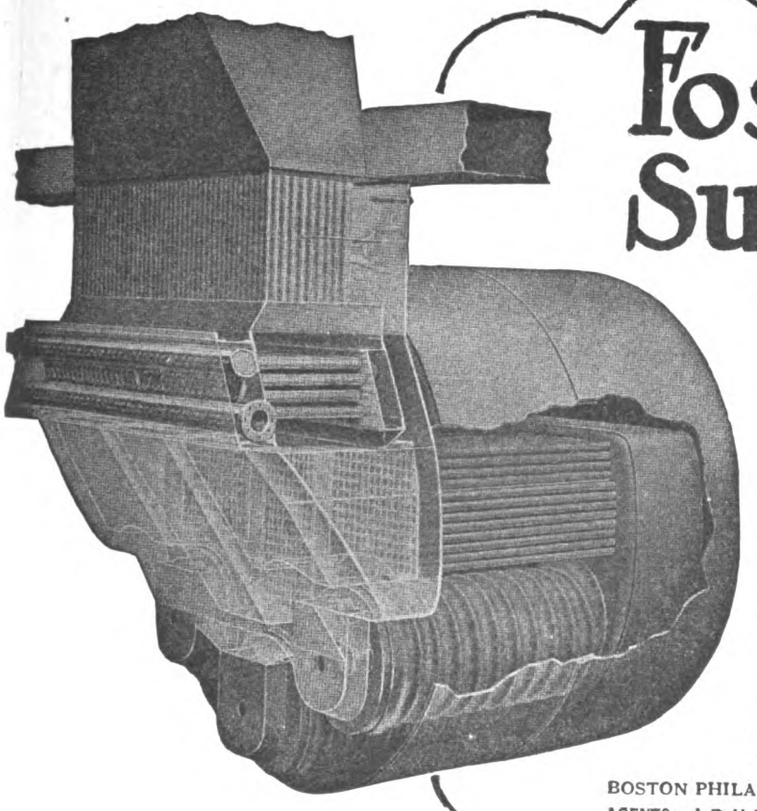
THE UNITED STATES ELECTRICAL TOOL COMPANY, CINCINNATI, OHIO

Branch Offices: BOSTON CHICAGO CLEVELAND DETROIT NEW YORK PHILADELPHIA ST. LOUIS

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN



Foster Marine Superheaters

are regular equipment on
More Than
5,000,000 Tons
of American Shipping,
built or on order

More speed with less fuel.
Greater boiler capacity.
Best steam conditions for all engines.
Fool proof, trouble proof, efficient.

Power Specialty Company

111 Broadway New York
BOSTON PHILADELPHIA SAN FRANCISCO CHICAGO PITTSBURGH
AGENTS: J. D. Hull, Seattle, Wash. Canada: General Supply Co. of Can. Montreal, Ottowa, Toronto, Winnipeg.
LONDON ENGLAND, OFFICES
315 OXFORD STREET, W. I.

NEW Cleveland POCKET-IN-HEAD Riveter

NEW CLEVELAND "POCKET-IN-HEAD" RIVETING HAMMER MOST POWERFUL RIVETING HAMMER ON THE MARKET

The New Cleveland is shorter over all. Hits a harder blow, and uses less aid than any hammer made.

The New Cleveland has a higher speed with less recoil in operation than any riveter on the market.

We can prove it in your work

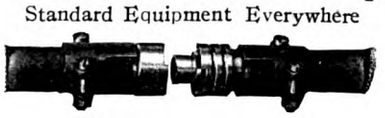
THE NEW CLEVELAND is made in 15 sizes with Outside or Inside Latch, and is adapted to all classes of work upon which Riveting Hammers can be used.

THE NEW CLEVELAND has a driving range in rivets from ¼-inch to 1½-inches, and is especially adapted for Shipbuilding, Boiler Construction or any riveting where speed and power are required.

IN STOCK: Riveting Hammers, Chipping Hammers, Air Drills for Reaming and Tapping, Breast Drills, Corner Drills, Portable Air Grinders in two sizes, Oscillating Valve Grinders, etc.

Bowes Air Hose Couplings

Standard Equipment Everywhere



Air-tight under all pressures.
Quickly connected or disconnected.

Interchangeable in all sizes from ¼-inch to ¾-inch inclusive.

Shows Cleco Never-Slip Hose Clamps Attached to Bowes Coupling

Write for Bulletins Nos. 34A, 41 and 43

THE CLEVELAND PNEUMATIC TOOL COMPANY

NEW YORK CHICAGO CLEVELAND, OHIO PITTSBURGH PHILADELPHIA
BOSTON SAN FRANCISCO DETROIT TORONTO, ONT.

NEW Cleveland POCKET-IN-HEAD Riveter

NEW Cleveland POCKET-IN-HEAD Riveter

NEW Cleveland POCKET-IN-HEAD Riveter

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

WINDLASSES AND WINCHES *for* EVERY MARINE REQUIREMENT

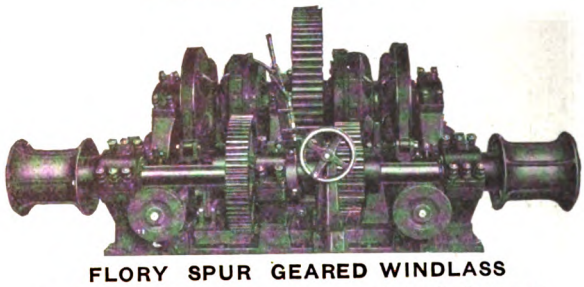
From a modern battleship to a harbor dredge there is a type of winch bearing the Flory trade-mark that is just right for the purpose for which it is needed. Many of our winches and windlasses are installed on government vessels and battleships.

FLORY

"The name that eliminates doubt"

The spur geared windlass shown here was built for the U. S. Navy.

Has extra large shafts with liberal bearing surfaces and is made for all sizes of chains.



FLORY SPUR GEARED WINDLASS
Built for and Installed on the U. S. S. Niagara

Steam or electric drive — all steel gearing with machine cut teeth—bar type cross head guide. Stiff and rugged housing designed for maximum shocks.

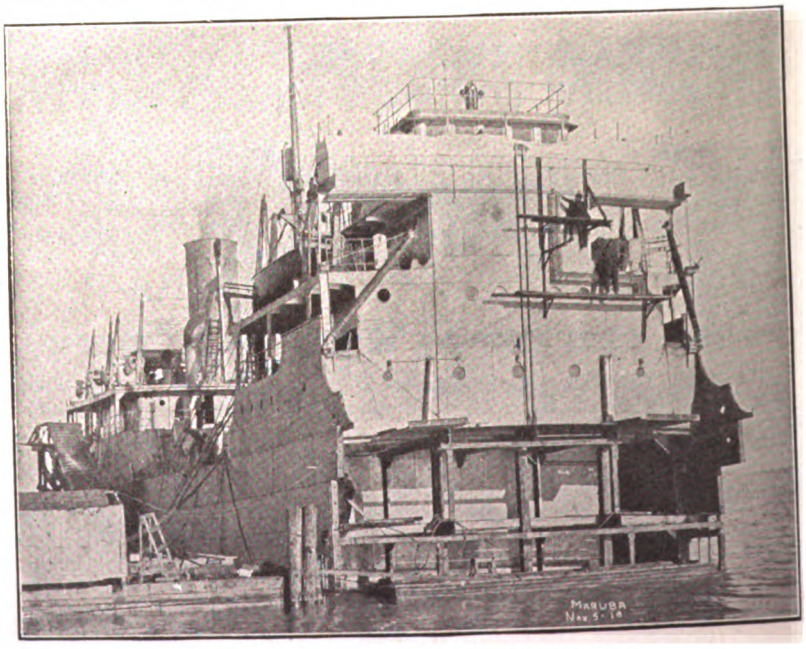
Write for the Flory Catalogue and tell us your marine requirements.

S. FLORY MANUFACTURING CO.

Bangor, Pa.
First National Bank Bldg., Pittsburgh, Pa.

New York, 95 Liberty Street
Monodnock Block, Pittsburgh, Pa.

SHIPS FOR ALL SERVICES LAKE OVERSEAS AND COASTWISE



GENERAL REPAIRS TO STEEL AND WOODEN VESSELS

—

MARINE RAILWAY

BUILDERS OF STEEL and WOODEN SHIPS

IMPERIAL SHIPBUILDING CORPORATION
DETROIT, MICH.

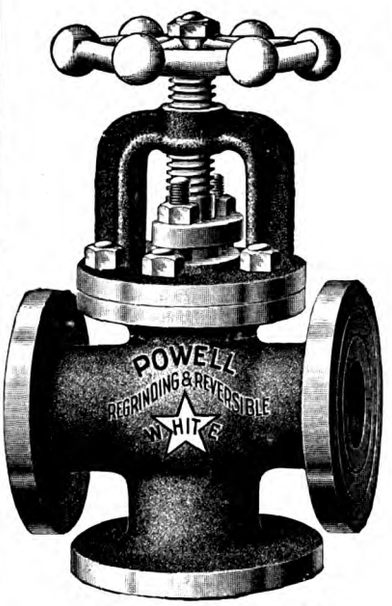
When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

ESTABLISHED IN 1846



ASK YOUR DEALER FOR POWELL "WHITE STAR" VALVES, OR WRITE US.

POWELL VALVES

(Especially The "White Star" Valve)

MR. ENGINEER:

WE CAN FURNISH ALL SIZES OF POWELL "WHITE STAR" VALVES WITH OUTSIDE SCREW STEMS AND YOKES.

THE ADVANTAGE OF THE YOKE IS THAT THE OPERATING THREADS ON STEM ARE OUTSIDE IN THE UPPER PART OF YOKE, AND NOT EXPOSED TO THE WEARING EFFECTS OF THE STEM, AND PROLONGS THE USEFULNESS OF THE VALVE.

THESE VALVES ARE MADE OF A STEAM BRONZE COMPOSITION ADOPTED BY THE U. S. GOVERNMENT FOR ITS NAVAL SERVICE.

THE WM. POWELL CO.
DEPENDABLE ENGINEERING SPECIALTIES.
CINCINNATI, O.

THE FOUNDATION COMPANY

SHIPBUILDERS

WOOLWORTH BUILDING
NEW YORK

16 RU DE LA PÉPINIÈRE
PARIS

VESSELS UNDER CONSTRUCTION

VICTORIA YARD

20—3,000 D. W. Ton Wooden Cargo Steamers for the French Government

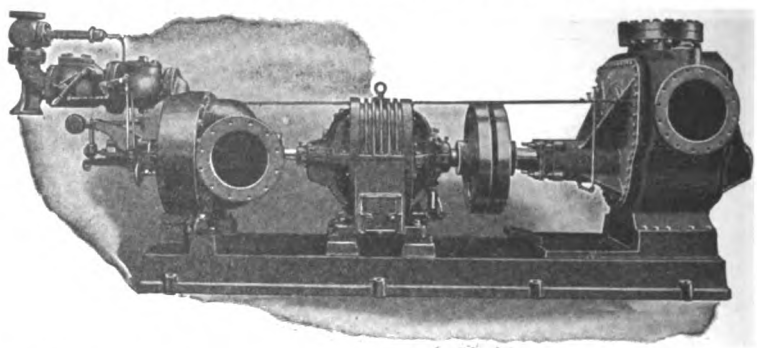
NEW ORLEANS YARD

5—4,250 D. W. Ton Steel Cargo Steamers for the French Government

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

QUALITY
Kinney
EFFICIENCY

STEAM JACKETED CARGO PUMPS



KINNEY TURBINE DRIVEN, STEAM JACKETED CARGO PUMP, designed for pumping heavy Mexican crude oil, capacity 3000 GPM. These units have been adopted by the Navy Department, Bureau of Steam Engineering and Bureau of Yards and Docks.

SEND FOR CATALOG

THE KINNEY MFG. CO. **BOSTON, MASS.**

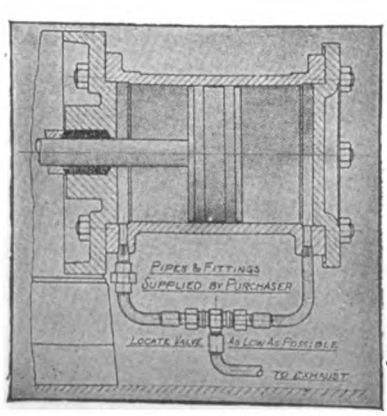
The Dew Automatic Relief Valve

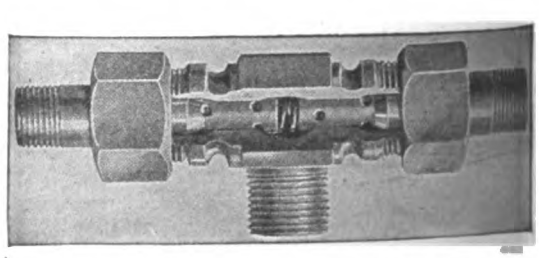
for

Draining Steam Cylinders

DEW VALVE COMPANY, Inc.

Main Offices and Sales Department
149 BROADWAY
NEW YORK CITY



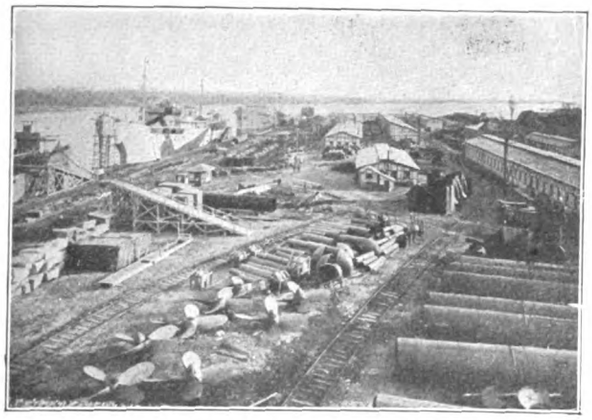


Successfully in use on Auxiliary machinery, on various Steamship Lines and in use in many Stationary Plants.

MANUFACTURERS OF KINGHORN VALVES

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Fields Point, Providence, R. I.

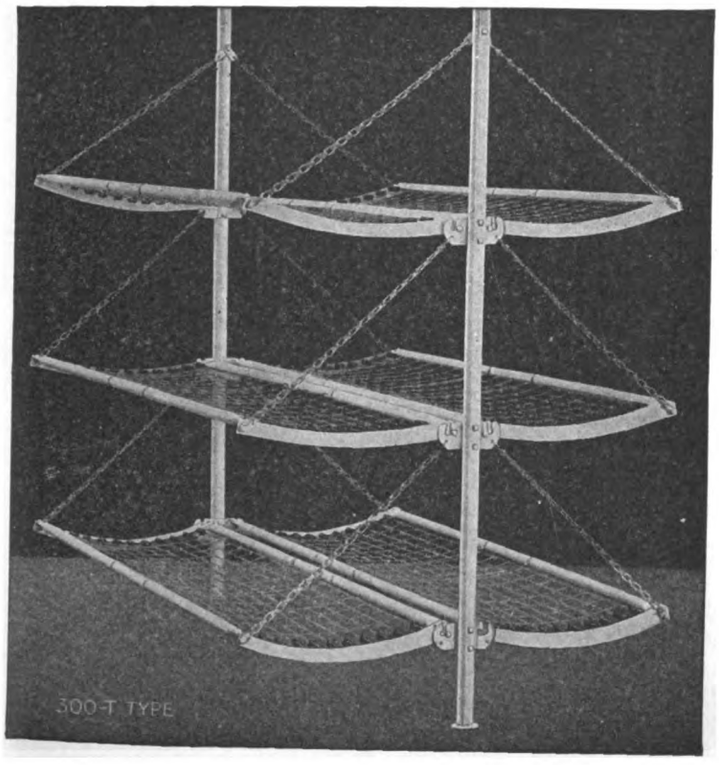
LORD CONSTRUCTION CO.

Ship Repairs

Offering immediate facilities for all ship repair work not requiring dry docking. The time required to send ships to Providence is more than offset by prompt attention and sufficient labor. The best work at lowest cost.

New York: Bryant 4560
Boston: Main 978
Providence: Broad 5133

NEW YORK CITY
105 West 40th Street



FOSTER "IDEAL"

SHIP BERTHS

Officers' Berths
Crew Berths
Troop Berths
Built-in Berths
Standees and Fittings
Brass and Iron Beds

Used by U. S. Army, Navy, and Emergency Fleet Corp.

WE SOLICIT YOUR INQUIRIES

Foster Bros. Mfg. Co.
UTICA, N. Y.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

CAMERON MARINE PUMPS

On board ship, where space is at a premium and many pumps must operate against heads which constantly vary—involving an extremely wide range of operating capacity, Cameron Simplex Vertical Marine Pumps fulfill all requirements.

They are extremely rugged and strong, and have very few parts, all of which are readily accessible without disconnecting any piping. Cameron Vertical Marine Pumps are built for continuous operation at a negligible cost for maintenance.

Send for Bulletin 7205

A. S. Cameron Steam Pump Works
11 Broadway, New York. Offices the World Over
87-5

CAMERON VERTICAL MARINE PUMP

PRACTICAL MARINE ENGINEERING

(SEVENTH EDITION)

By Rear Admiral C. W. DYSON, U. S. N.

This book is devoted exclusively to the practical side of marine engineering and is especially intended for engineers and students and for those who are preparing for examinations for marine engineers' licenses for all grades. It gives complete details regarding marine engines and all that pertains to them, together with much information regarding auxiliary machinery. It covers the general subject of calculations for marine engineers and furnishes assistance in mathematics to those who may require such aid.

Boilers, reciprocating engines, steam turbines and reduction gears (mechanical, hydraulic and electric) are treated exhaustively. A separate chapter deals with internal combustion engines (Diesel and heavy oil) and producer gas plants. Oil fuel burning and the latest practice in superheated steam are taken up in detail. The chapter headings include the following: Materials; Fuels (coal and oil), Boilers (Fire tube and watertube), Oil Fuel Burning, Marine Engines, Reciprocating Engines, Steam Turbines, Internal Combustion Engines, Gasoline, Heavy Oil (Diesel) Producer Gas. Auxiliaries; Pumps, Condensers, Feed Heaters, Filters, Evaporators, Lubricating Devices, Separators, Blowers, Pneumercators, Time Firing Regulators, Steam Traps, Ash Ejectors, etc., Valves and Valve Gears, Refrigeration, Electricity, Propulsion and Powering, Operation, Management and Repairs, Boilers, Engines, Turbines and Auxiliaries, Indicators and Torsion Meters, Special Topics and Problems, Computations for Engineers, Miscellaneous Machinery. 1067 pages. The book is illustrated with 550 diagrams and cuts, showing the most approved practice in the different branches of the subject. The text is in such plain, simple language that any man with an ordinary education can easily understand it.

PRICE, $6.00

FOR SALE BY MARINE ENGINEERING, 6 East 39th St., New York City

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

THE MACHINIST SAYS:

Starrett Tools

"Sure I'm using them, the same as most of the men in the shop are doing. Some of the Starrett tools in my kit, I bought when I was an apprentice.

"Y' see it's like this. We got the habit when we were kids. We saw the older men, the ones that were doing the finer work, preferred Starrett Tools because they knew they were accurate, and we copied after 'em—just like our kids are doing today.

"How's that? No, I wouldn't go so far as to say Starrett Tools by themselves will make a good machinist, but I will say this—Starrett Tools will make it a lot easier for any machinist to do good work.

"Yes, I've got one of their 'Starrett Data Books for Machinists,' and believe me, it saves a lot of time and mistakes. If I want to know a decimal equivalent, a taper dimension, the speed of a milling cutter, or something about materials, I don't have to guess or ask—I just look in the book and find out. It set me back seventy-five cents at the hardware store, but it saved me a blame sight more than that the first week."

THE L. S. STARRETT CO.

THE WORLD'S GREATEST TOOLMAKERS
Manufacturers of Hack Saws Unexcelled

ATHOL, MASS.

For thirty-nine years, Starrett Tools have measured the accuracy of the world's work.
Catalog No. 21 "L" free upon request.

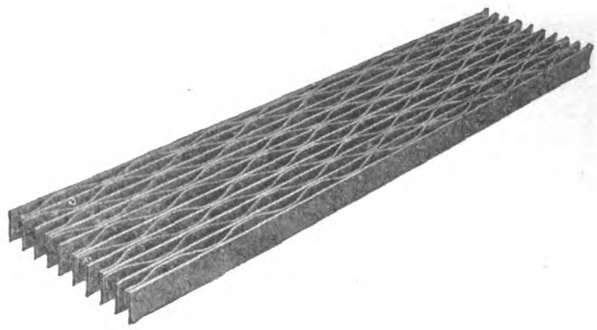
42-980

IRVING SUBWAY TRADE MARK (PATENTED) THE FIREPROOF VENTILATING FLOORING

IRVING SUBWAY TRADE MARK

(PATENTED) REG. U.S. PAT. OFF.

THE FIREPROOF VENTILATING FLOORING



Why buy ship grating outside?

For the mattter of that, why buy **anything** outside—engines, boilers, blowers, anchors, for instance?

Simply because engines, boilers, etc., made **by specialists** are **made better and at less cost** than you could make them.

Same way with grating — **made as a specialty by grating specialists, it's made better and at less cost.**

We were the first specialists in gratings—we make more gratings today than anyone else.

That means **quantity production, better quality, lower price.** Why not put your grating specifications up to grating specialists—which means, to us?

Catalog 2A10

IRVING IRON WORKS CO.

LONG ISLAND CITY, N.Y., U.S.A.

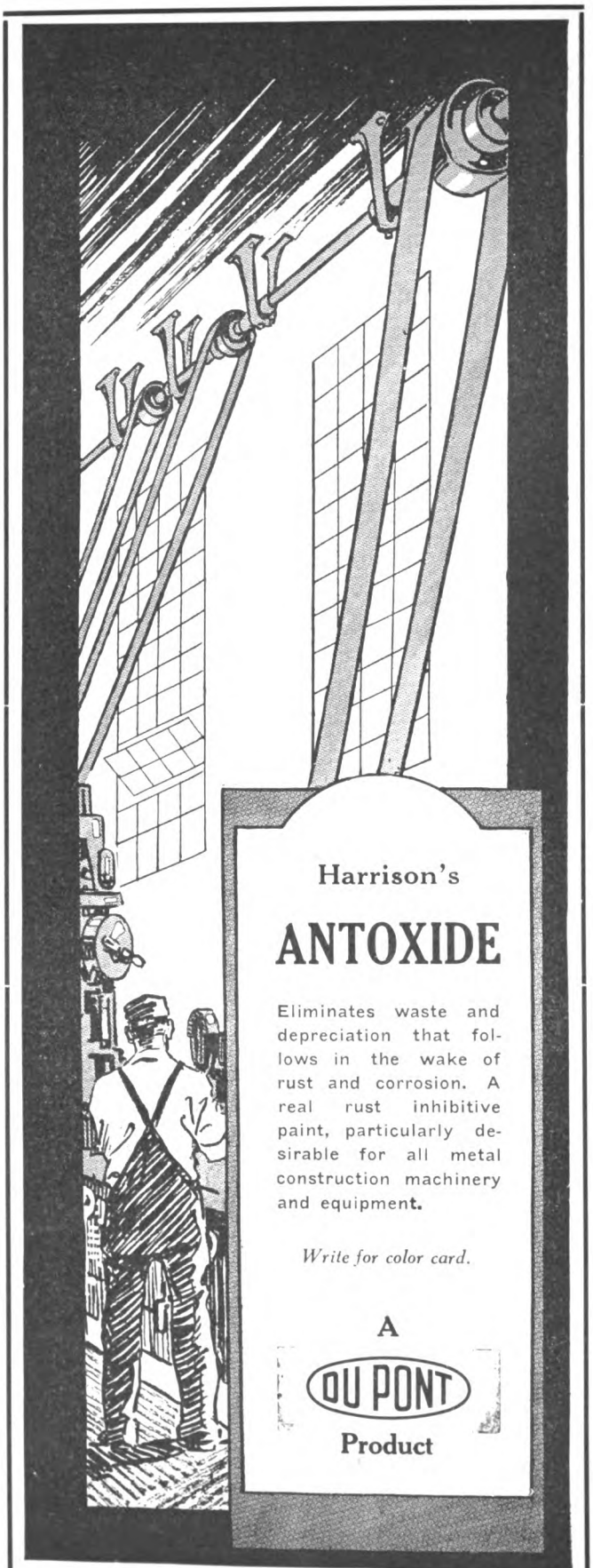
Manufacturers also of

IRVING SAFSTEP TRADE MARK

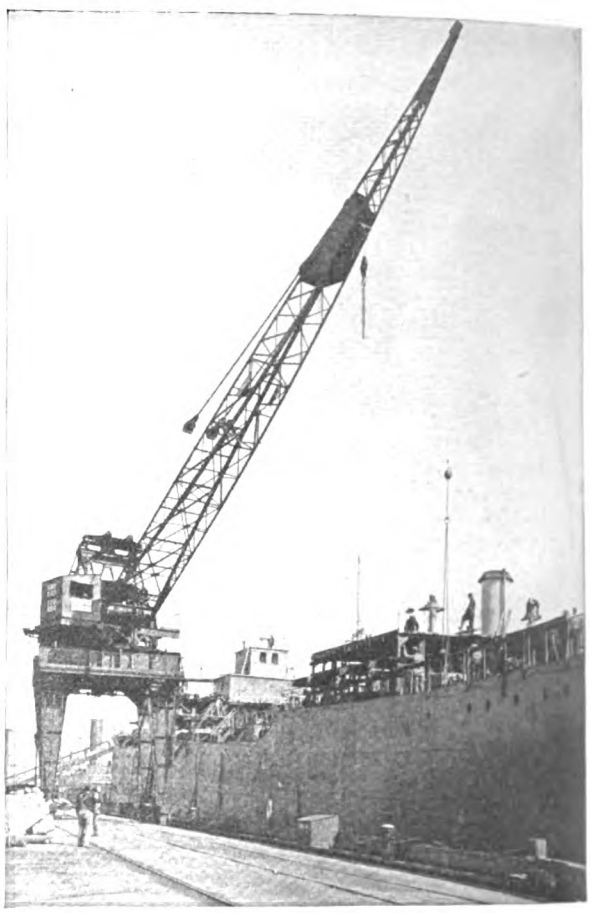
(PATENTED) REG. U.S. PAT. OFF.

ABSOLUTELY NON-SLIPPING ALWAYS

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN


Harrison's
ANTOXIDE
Eliminates waste and depreciation that follows in the wake of rust and corrosion. A real rust inhibitive paint, particularly desirable for all metal construction machinery and equipment.
Write for color card.
A
DU PONT
Product

E. I. du Pont de Nemours & Co., Inc.
Sales Department, Paint & Varnish Div.
WILMINGTON, DELAWARE
Philadelphia Chicago Boston New York Columbus, O.
Minneapolis Kansas City



BROWNHOIST

Makes Freight Handling Easy

This big Brownhoist Portal Pier type Locomotive Crane will toy with most bulk and package cargoes which sometimes cause so much trouble in unloading. With its long, high boom it will reach any point on the ship, doing its work rapidly and with no confusion. Or with the auxiliary hoist, it has the titantic strength to lift packages weighing tons and to place them wherever you may choose.

The portal pier is made to span one or more railroad tracks and the cargo may be loaded into the waiting cars or placed in the near-by warehouses. It is a very useful machine about which you should know more. Write for catalog K.

The Brown Hoisting Machinery Company

40 Years in Crane Business — **Cleveland, Ohio, U. S. A.**

Engineers and Manufacturers of Heavy Dock Machinery, Bridge Cranes, Etc., as well as Smaller Cranes and Hoists.

Branch Offices in New York Pittsburgh, Chicago and San Francisco

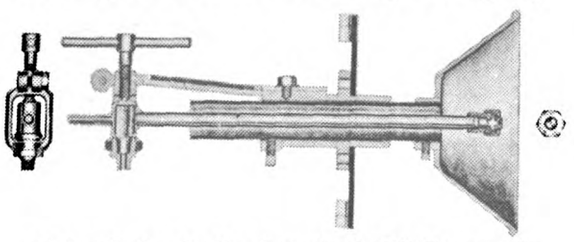
Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

FUEL OIL BURNERS

(Dahl Patents-Mechanical Atomization of Oil)

Manufactured by

Redington Standard Fittings Company



This Mechanically Atomized Oil Burner Is NOISELESS, INSTANTLY CONTROLLED, SMOKELESS AND CAN BE

Adapted to any type of Boiler

Capacities of Single Burners from 50 to 630 I.H.P.
Operates on Oil Pressure of 30 to 200 pounds

COMPLETE SYSTEMS AND SPARE PARTS CARRIED IN STOCK FOR IMMEDIATE SHIPMENT

Write for Catalog to the

Redington Standard Fittings Company
Bethlehem, Pennsylvania

KELLER

KELLER-MADE

HOW ABOUT TIME YOUR MEN LOSE WAITING FOR REPAIRS?

THE individual workman is not to blame for the time lost while waiting for repairs on inferior tools. The foreman is not to blame for the occasional decrease in his output when he is denied first-grade equipment.

KELLER - MADE MASTER - BUILT PNEUMATIC TOOLS save time for the workman, increase output for the foreman and cut down expense generally by converting non-productive time into productive labor. There's a KELLER-MASTER TOOL for every purpose—and every KELLER - MASTER TOOL is the best for the purpose.

Write our nearest branch office for particulars.

KELLER PNEUMATIC TOOL CO.
Grand Haven, Mich., U. S. A.

Branch Offices:

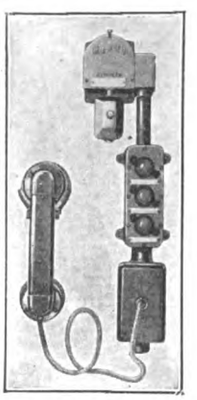
Birmingham, Boston, Buffalo, Cleveland, Chicago, Detroit, Milwaukee, New York, Philadelphia, Pittsburgh, Richmond, Salt Lake City, Seattle, San Francisco, St. Louis, St. Paul, Washington.

MASTER-BUILT

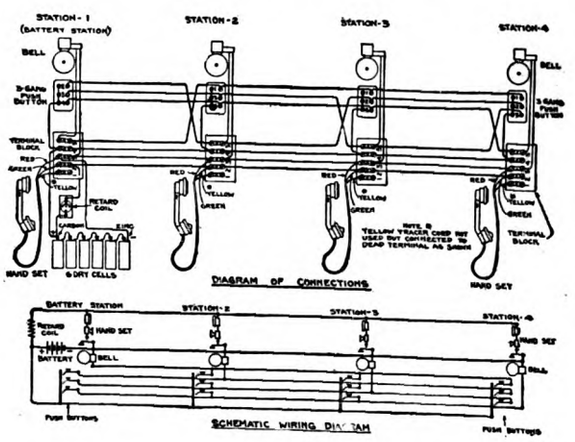
Western Electric

MARINE INTER-PHONE

Western Electric Marine Inter-phones are essential and economical. With them you can get into instant communication with any part of the ship. Just pick up the receiver, press the ringing button and talk. No operator is needed—the user makes his own connection.



The Western Electric Marine Inter-phone is a non-watertight system of 3 to 8 stations, for connection between pilot house, engine room, wireless room, staterooms, and other locations as desired. Each station consists of a telephone hand set, bell, push buttons and a terminal box as shown above. The system is to be wired as shown in the diagram, and comprises a complete, dependable and durable means of communication between the various stations. All parts are specially treated for marine use. A similar system can be furnished for 2 stations, as from pilot house to engine room, from wireless room to captain's cabin or between any other points.



For details of installation get in touch with our nearest house.

Western Electric Company

INCORPORATED

Offices in All Principal Cities

New York	Richmond	Detroit	Oklahoma City
Syracuse	Memphis	Milwaukee	Houston
Newark	Savannah	Minneapolis	San Francisco
Boston	Charlotte	St. Paul	Oakland
New Haven	Birmingham	St. Louis	Los Angeles
Providence	New Orleans	Duluth	Seattle
Philadelphia	Chicago	Cincinnati	Portland
Pittsburgh	Cleveland	Kansas City	Spokane
Atlanta	Buffalo	Omaha	Denver
Baltimore	Indianapolis	Dallas	Salt Lake City

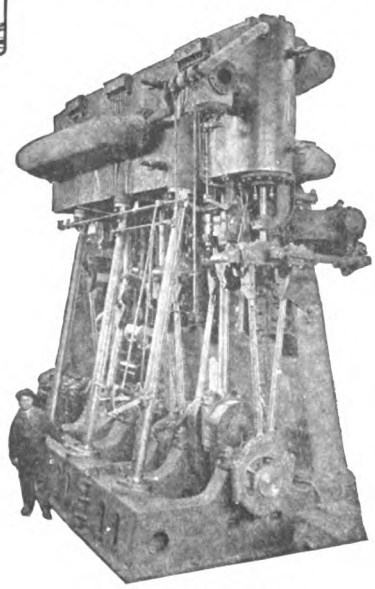
EQUIPMENT FOR EVERY ELECTRICAL NEED

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Vulcan Iron Works, Inc.

BUILDERS OF

Marine-Engines & Boilers



PARSONS
MARINE STEAM TURBINES

FOOT OF HUDSON ST. JERSEY CITY, N. J.

Telephone 3940 Montgomery

THE PEASE PEERLESS

BLUE PRINTING EQUIPMENT

THREE MACHINES IN ONE

Can be installed in one end of drafting room constantly under supervision of chief draftsman. Occupies only 5½ x 6½ ft. of floor space.

No open wash trays. No wet floors. No lines of dripping prints. No waste of sensitized paper. No noisy and unreliable friction disks. All speeds electrically controlled. Exposed paper is thoroughly washed, evenly dried, and delivered free from distortion or wrinkles. Printer may be used independently from Washer and Drier if desired.

Maximum output, one operator, 100 linear yds. per hour, consuming only 7 Kw. electric energy and 50 cubic feet of gas. Electricity, instead of gas, may be used for drying, if desired.

Packed carefully for export. Write now for new Catalog B.

THE C. F. PEASE COMPANY
230 Institute Place
Chicago, Illinois,
U. S. A.

PUNCHES
DIES
RIVET SETS
CHISEL BLANKS

The Recognized Standard
of
Quality and Service

MADE BY

The Cleveland Steel Tool Co.
660 East 82d Street
Cleveland, Ohio

YOU'RE SAFE—

When You Buy WILLIAMS Valves

You've run across valves on which the thread on the stem was small, poorly fitted and soon wore out, haven't you? You do not want that kind—they're money-losing.

WILLIAMS

are the valves to buy. Threads on stems and in hubs are made especially long, and are so arranged that when the valve is closed and sustaining the greatest strain, both threads have contact over their entire length. This avoids danger of "stripped" threads—prolongs life of stems. Write us or your dealer.

Catalog for the Asking

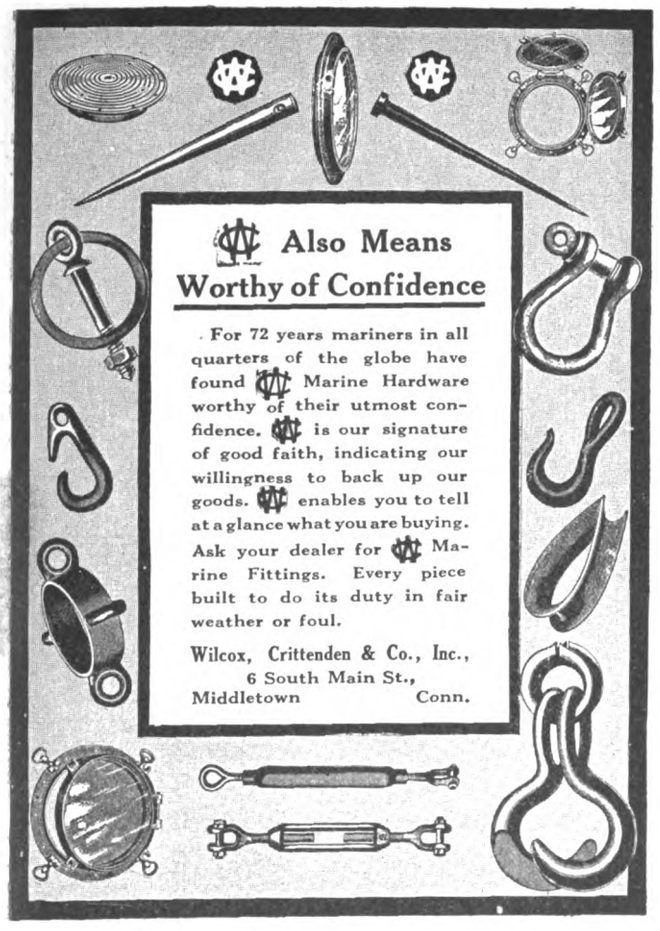
The D. T. WILLIAMS VALVE CO.
CINCINNATI, OHIO

New York Agents:
The Williams & Wells Co., - 250 Fulton Street

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

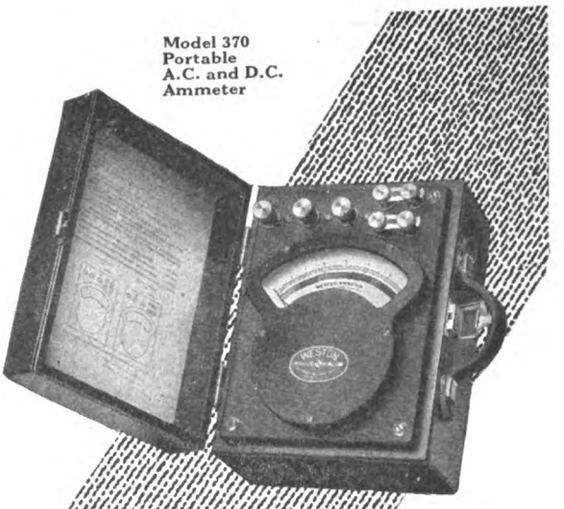


Also Means Worthy of Confidence

For 72 years mariners in all quarters of the globe have found Marine Hardware worthy of their utmost confidence. is our signature of good faith, indicating our willingness to back up our goods. enables you to tell at a glance what you are buying. Ask your dealer for Marine Fittings. Every piece built to do its duty in fair weather or foul.

Wilcox, Crittenden & Co., Inc.,
6 South Main St.,
Middletown Conn.

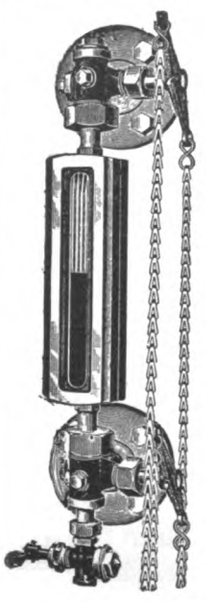
Model 370
Portable
A.C. and D.C.
Ammeter



Weston

Electrical Indicating Instruments
are unqualifiedly superior to any other instruments designed for the same service.
A.C. or D.C. Switchboard or Portable Instruments for every field of Indicating Electrical Measurement.
In writing for catalogs and bulletins, please specify the field that interests you.
WESTON ELECTRICAL INSTRUMENT CO.
53 Weston Ave., Newark, N. J.

JERGUSON



Engineering Specialties

REFLEX WATER GAGES

Used on all types of boilers by all the Principal Navies of the World

"THE WATER SHOWS BLACK"

ADVANTAGES:

Quick and reliable observation of the water level. Safe, sure and durable at high pressures. Not affected by cold air drafts. Most effective protection against injuries to boilers and workmen. Easily applied to all types of gauge glass fittings.

When filled with **WATER** the Reflex Gage always appears **BLACK.** When empty it instantly shows **WHITE.** No mistake possible. This feature alone is worth many times the cost of the Reflex.

Send for catalog of Water Gage Apparatus.

MANUFACTURED BY THE
JERGUSON GAGE & VALVE CO.

"PARKESBURG" CHARCOAL IRON
BOILER TUBES

are made from the same grade of knobbled Charcoal Iron which we have been producing continuously during the past fifty years.

Good Charcoal Iron Tubes will outlast steel tubes, due to their resistance to corrosion and crystallization, and tubes from Parkesburg Charcoal Iron are in service in marine boilers after thirty years' continuous use.

PARKESBURG IRON COMPANY
PARKESBURG, PA.

New York	Boston	Philadelphia
Chicago	New Orleans	San Francisco
Norfolk	St. Louis	St. Paul

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

NEPTUNE BOAT WORKS

Wood and Metal Lifeboats
Life Rafts

King and Dwight Streets
BROOKLYN, N. Y.

Hamilton 3071-3072
Telephones:

SHIP TIMBERS DECKING PILING

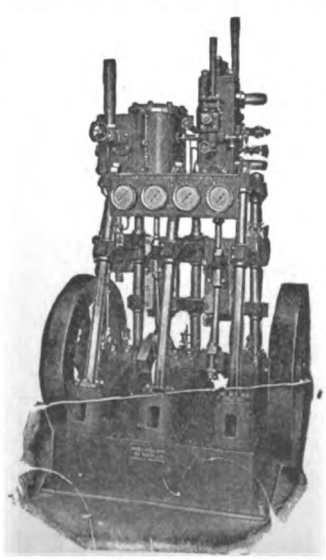
(Treated or Untreated)

The nature of Long-Bell Long Leaf Yellow Pine Timber, our immense holdings and conveniently located distributing yards, enable us to accept quantity orders and assure prompt shipments.

Quotations Promptly Upon Request.

THE LONG-BELL LUMBER CO.
903 R. A. Long Bldg., Kansas City, Mo.

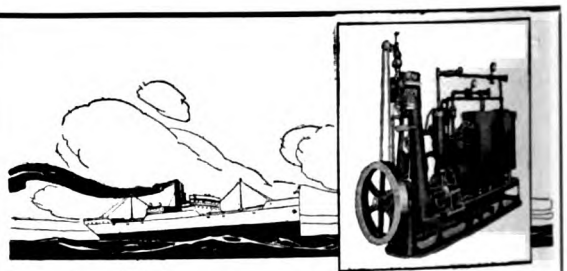
KROESCHELL SYSTEM FOR MARINE REFRIGERATION CO_2



HIGHEST EFFICIENCY
—
MAXIMUM CAPACITY with MINIMUM WEIGHT
—
SAFE
—
RELIABLE
—
ECONOMICAL

Write for information.

KROESCHELL BROS. ICE MACHINE CO.
Main Office: 472 W. Erie St., Chicago, Ill.
Eastern Office: 30 Church St., New York, N. Y.



It occupies a minimum of space

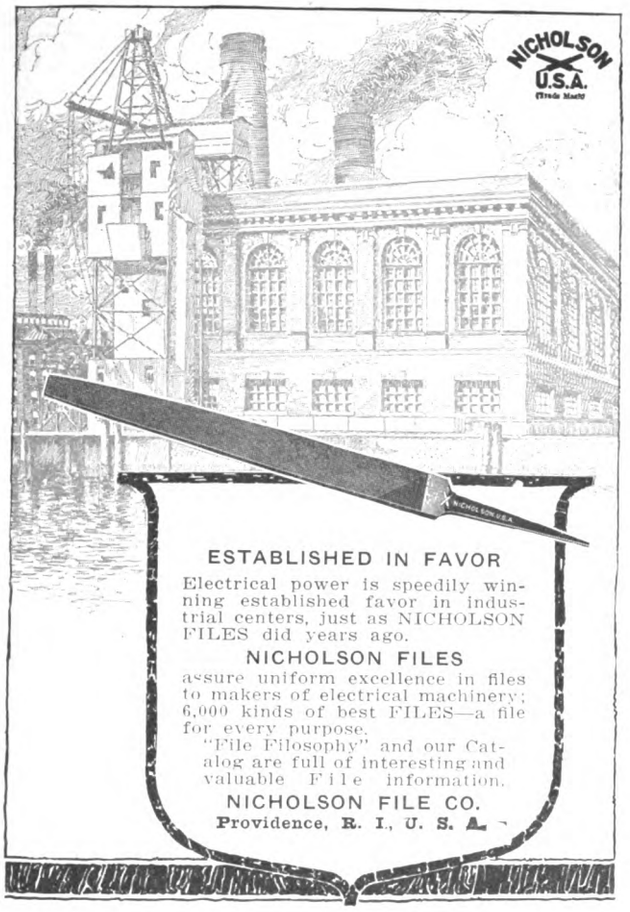
With freight rates at their present figure cargo space becomes doubly valuable.

This Standard-Toledo refrigeration set saves valuable cargo space for you. It reaches you in a unit all ready to install and saves time and labor in outfitting.

It will pay you to investigate.

Refrigeration Engineering Co.
Nasby Bldg. **Toledo, Ohio**

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



ESTABLISHED IN FAVOR

Electrical power is speedily winning established favor in industrial centers, just as NICHOLSON FILES did years ago.

NICHOLSON FILES

assure uniform excellence in files to makers of electrical machinery; 6,000 kinds of best FILES—a file for every purpose.

"File Filosophy" and our Catalog are full of interesting and valuable File information.

NICHOLSON FILE CO.
Providence, R. I., U. S. A.

SANDS N.Y. 1918 — MARINE PLUMBING — SANDS N.Y. 1918

Bear in mind the better kind when ordering

Plate S-2378

"VIDA" flushing rim oval iron hopper enameled inside; spud for 1¼" I. P.; self-raising reinfored oak seat. **$11.75**

Plate S-2446

"MODEL" vitro-adamant syphon action wash down flushing rim bowl; oak woodwork; N. P. brass hinges; galv. iron base plate; "Victor" flush valve. **$30.00**

Plate F-676A

"Ardel" Porcelain Enameled Iron, roll rim, one piece lavatory 14x15", on concealed hanger. N. P. brass compression faucet. N. P. brass waste plug with strainer and tail piece. N.P. cock hole cover chain stay, chain and rubber stopper, **$11.75**

Plate F-676A

1849 — A. B. SANDS & SON CO. 22-24 Vesey St. New York, N. Y. — 1919

THE LONG ARM OF THE

Babbitt

—Adjustable—

SPROCKET RIM

with Chain Guide

spells "safety first" for men and materials. Somewhere there is an out-of-reach valve which must be closed quickly. Stop climbing that rickety old ladder and close the valve by chain.

The BABBITT fits any valve; installed with a wrench in five minutes.

Write for Catalog.

BABBITT STEAM SPECIALTY CO.
New Bedford - - - Mass.

Canadian Agents:
Engrg. Specialties Co., Ltd., Toronto, Ont., Can.
Jenkins Bros., 300 W. Lake St. Chicago, Ill.

JUST 10

IN STOCK

30" Cast Iron Cleats

Pattern No. 2046 A

Weight 111 lbs. each

READY FOR PROMPT SHIPMENT

but subject to prior sale

Write at once

THE CENTRAL FOUNDRY COMPANY
90 WEST STREET, NEW YORK

M-117

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Winter-Proof Upholstery

Stormy weather demonstrates the value of Fabrikoid upholstery.

Unaffected by moisture, mould or mildew, it stands every test.

Its rugged strength, its sanitary, cleanable character are salient service qualities.

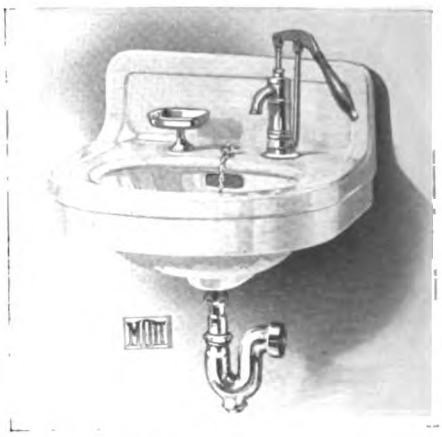
You can put more into other upholstery but you will get the most out of Fabrikoid.

Samples on request

Du Pont Fabrikoid Co.

Wilmington, Delaware

MARINE PLUMBING



"MARINE PLUMBING"

"Sent on Request"

A complete catalogue of Marine Plumbing Fixtures suitable for vessels of every description, from the smallest power boat to the largest ocean liner.

THE J. L. MOTT IRON WORKS

GENERAL OFFICES AND PLANT, TRENTON, N. J.
Fifth Avenue and Seventeenth Street, New York.
Philadelphia, Washington, Boston, Chicago
Seattle, and all principal Cities.

Production experts on sheet metal work specify Thomson Spot Welders, because from inquiries and personal experience know that our machines always deliver the welds in amazing quantity, and welds that hold.

Think of it—no rivets to buy—no punching of holes—and no heading over of rivets with noisy hammers. Production trebled and quadrupled and at less cost than with old methods. Better write us.

THOMSON SPOT WELDER COMPANY

Thomson Electric Butt Welders can play a most important role in your shop as one of the production wonders of the age. The parts to be welded are butted together and clamped in place, the current applied by a conveniently located push button switch and the weld made in less time than it takes to tell about it. Production 25 to 1000 welds per hour depending on the size and shape of work. Another feature—THOMSON WELDS HOLD.

THOMSON ELECTRIC WELDING CO.,
Lynn, Mass.

The Standard of Service for Forty-Seven Years

EDWARDS BELLS

Annunciators—
Push Buttons—Buzzers, and
Fire Alarm System
have been the Standard
for Marine Service

Write for Marine Bulletin

EDWARDS & COMPANY INC.

ESTABLISHED 1872

CHICAGO Monadnock Block | NEW YORK 140th and Exterior Sts. | ATLANTA 29 Poplar St.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Drafting Supplies

We manufacture a full line of high grade supplies made under our own supervision. We know they are right.

Quality Plus

and at prices that appeal.

A Specialty Our MONROE Drawing Table

A table of general utility made after our own ideas. Stands rigid and lasts a lifetime.

Let us quote on your needs.
Ask for catalogue H.

NEW YORK BLUE PRINT PAPER CO.

102 Reade St. NYB **New York City**

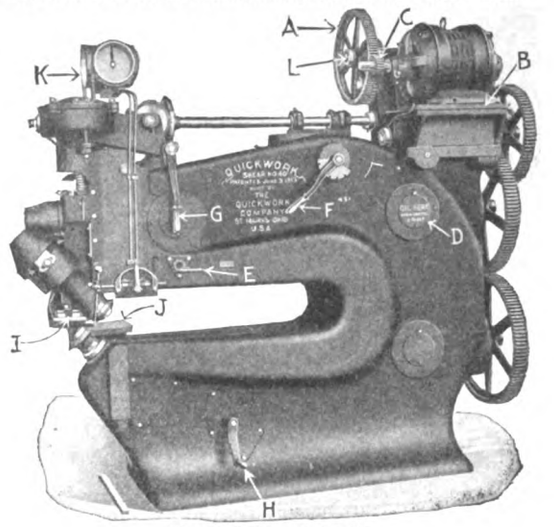
"QUICKWORK"

Registered In U.S.A. and Foreign Countries

ROTARY SHEARS

MADE IN 7 SIZES

Cut all gauges of sheet and plate metal up to 1 inch thick in straight or irregular shapes and openings without cutting in from side of sheet. Leaves square true edge that requires no finishing. Used in building ships, boilers, tanks, cars and general plate and sheet metal work.



Patented June 3rd, 1913

SAVE 50% TO 90%

Eliminates Oxy-Acetylene Cutting and Plate Planing

WRITE FOR CATALOGUE NO. 60

THE QUICKWORK COMPANY, ST. MARYS, OHIO, U. S. A.

Cable address "QUICKWORK" CODES: W. U. & General

NEGATIVE AUTO-SUGGESTION!

EVER HEAR OF IT?

Well, it is the Ability to Compel Forgetting Something You Need Constantly.

TRY IT ON THIS.

DETROIT OFFICE
905 Dime Bank Bldg., Detroit, Mich.

F. M. COBBLEDICK CO.
693 Mission St., San Francisco, Cal.

CAN YOU DO IT?

Bryant Lamp Receptacle For Sea Service

BRYANT
SUPERIOR WIRING DEVICES

Base is of unbreakable molded composition; no unprotected steel to rust in moist salt air. Double binding screw terminals are provided so that taps may be taken directly off terminal plate without soldered connections in the box.

Two of these receptacles can be mounted in a four-inch round box; and a separate circuit can be run in groove of receptacle base.

The Insulator, listed separately, is used when necessary to protect the screw shell.

Keyless receptacle, switches, fuse and interconnecting blocks, "Spartan" receptacles and caps—all approved fittings—are included in the Bryant Marine Line. Write for details.

THE BRYANT ELECTRIC COMPANY

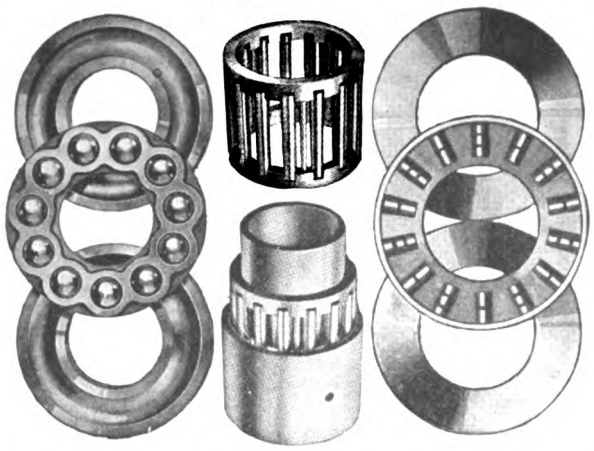
BRIDGEPORT, CONN.

NEW YORK CHICAGO SAN FRANCISCO

Largest Manufacturers in the World of Electrical Wiring Devices

2052A

Generated on 2024-09-12 08:43 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



BALL AND ROLLER

BEARINGS

STANDARD OR SPECIAL SIZES

Write for Catalog

THE GWILLIAM COMPANY

253 W. 58TH STREET NEW YORK

CEDERVALL'S PATENT

Protective and Lubricating Boxes

FOR PROPELLER SHAFTS

Are fitted to more than 4,000 Steamers, with shafts ranging between 1½ in. and 20⅝ in. in diameter.

Our system insures maximum safety of propeller shafts, as these are running in oil, consequently no corrosion. . . . . The costly liners on shafts may therefore be dispensed with as being absolutely superfluous. . . . . .

FRICTION MINIMIZED

Consequently

—POWER SAVED.—

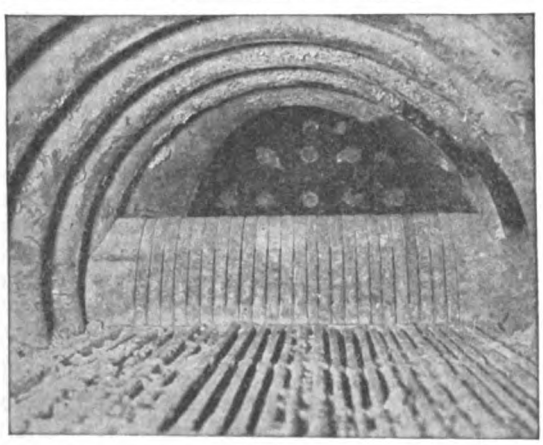
Old Stern Tube Arrangements can be altered for application of this Lubricating Box at a very Nominal Cost. . . . . .

MAKERS:

F. R. CEDERVALL & SÖNER

GOTHENBURG, SWEDEN

AGENTS—*United States—West Coast:* HANLON DRY DOCK & SHIPBUILDING CO., INC., Oakland. *England, East Coast.* N. STOTHARD, Newcastle-on-Tyne. *England, West Coast:* MAXTON & SINCLAIR, Liverpool. *Scotland and Ireland:* JOHN G. KINCAID & Co., Ltd., Greenock. *Norway:* I. VON DER LIPPE, Christiania; C. DAHM, Bergen; OLAF BERG, Stavanger. *Netherlands and its Colonies:* N. V. SOERABAYASCHE MACHINENHANDEL, v/h Becker & Co., The Hague. *Italy:* DOTT. ATTILIO PANZANO, Genova.



Boiler Efficiency With Minimum Expense

The Wager Furnace Bridge Wall has proved its value in actual use under all conditions. It has been giving economical service for years without repairs in the fleets of many of the steamship and railroad companies, as well as scores of ships for the United States Government. Equally serviceable for marine or stationary boilers using either hard or soft coal.

Send for booklet "M" containing information of vital interest concerning boiler efficiency, together with a list of installations, which is in itself the strongest kind of indorsement of the Wager Furnace Bridge Wall.

Wager Furnace Bridge Wall Company, Inc.

149 Broadway New York

SEATTLE PORTLAND SAN FRANCISCO

FOREIGN REPRESENTATION

"DURABLE" WIRE ROPE

FOR MOORING, TOWING HAWSERS, SHIP'S RIGGING AND SIMILAR PURPOSES

This wire rope is made of selected steel, and each strand is separately served with a specially prepared hemp marline.

It combines the pliability and wearing surface of hemp or Manila ropes with the strength of ordinary wire rope, avoiding the disadvantages of both, and being far more *durable* and economical than either.

Full detailed information upon application.

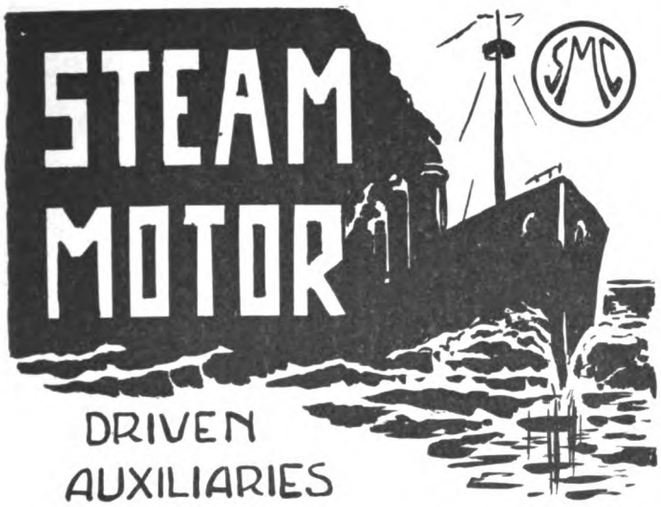
DURABLE WIRE ROPE CO.

93 PEARL STREET, BOSTON, MASS.

Generated on 2024-09-12 08:14 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

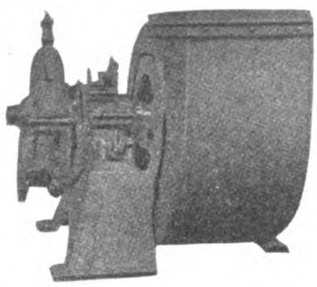
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



SAVE

SPACE • WEIGHT • TROUBLE

THE STEAM MOTORS CO.
SPRINGFIELD MASS. U.S.A.



Use
Livingston Electric Service

For PLANNING and INSTALLING new equipment

For RENEWAL and REPAIRS to old equipment

For SCIENTIFIC ILLUMINATION of the factory and yard

For PURCHASE of apparatus and supplies

Generator Sets, Wireless Sets, Switchboards
Marine Lighting Fixtures, Marine Fittings,
Electrical Merchandise

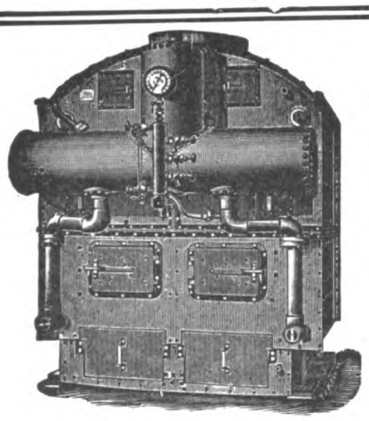
Correspondence Invited

J. LIVINGSTON & CO., Inc.
GRAND CENTRAL TERMINAL, NEW YORK

Show Rooms and Warehouse
104 E. 41st ST.
NEW YORK

LIVINGSTON ELECTRIC SERVICE

Branch Offices
SYRACUSE, N. Y.
CLEVELAND, OHIO
WASHINGTON, D. C.
GLEN COVE, L. I.



We Build

Light, compact, durable, accessible, sectional

Boilers

for all marine purposes

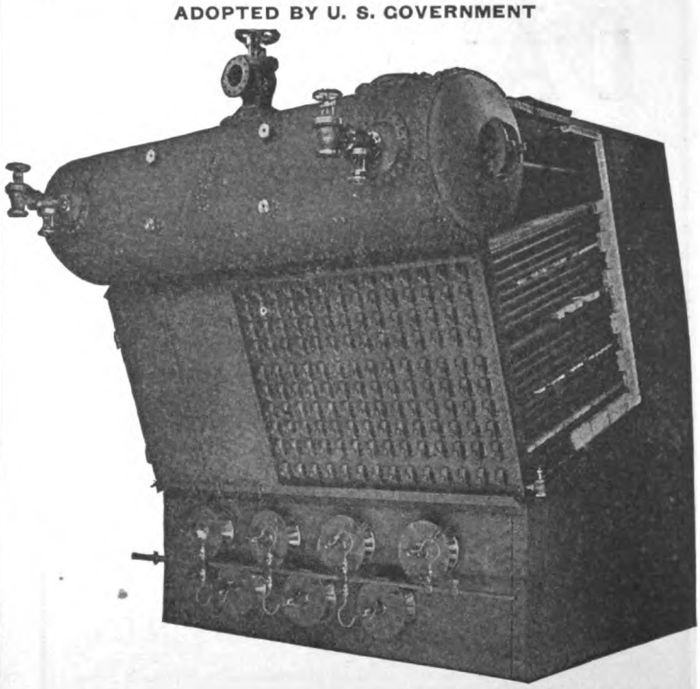
Our new catalogue describes them, tells who has them, shows cuts of more than 330 vessels we have equipped.

Let us mail you one

ALMY WATER-TUBE BOILER CO.
PROVIDENCE, R. I.

WARD'S WROUGHT STEEL MARINE BOILER

ADOPTED BY U. S. GOVERNMENT



GENERATING TUBES EXPANDED. NO OTHER JOINTS.
NO NIPPLE CONNECTIONS. NO STAYBOLTS.

THE CHARLES WARD ENGINEERING WORKS
CHARLESTON, WEST VIRGINIA

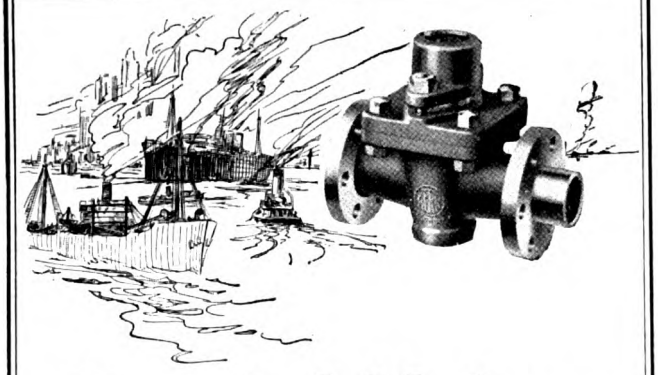
MARINE ENGINES RIVER STEAMERS

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN



Special Valves

Any standard or special type of valve in brass or iron made exactly according to specifications. We have patterns for many types of overboard discharge valves, sea cocks, blow-off cocks, screw-down check valves, weighted check type of angle and globe valves and others. Write for quotations.

Kerr Machinery Corporation
Marine Equipment Division
Kerr Building — Detroit, Mich.

Twelve-Inch 3-Bell Gong

Especially Adapted For Fog Signals

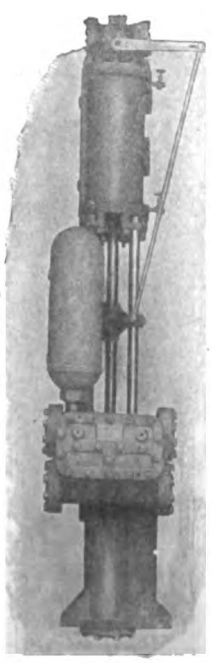
Our Steam Gongs are different from ordinary steam whistles and produce an immense volume of sound, which, while soft and pleasing near by, extends over an incredibly large range. We have authentic reports of these gongs having been heard over distances upwards of twenty miles.

The two larger bells produce the volume and power of sound to cover long distances, while the small bell has the penetration necessary to be heard above nearby noise.

Send for Catalog

UNION WATER METER CO.
WORCESTER - - MASS.

DAVIDSON PUMPS



for ALL MARINE SERVICES

Write for Catalog showing full line

M. T. DAVIDSON CO.
154 Nassau Street, N. Y.

32 Oliver Street, BOSTON
149 No. 7th St., PHILA.

J. D. HULL, Agt., Seattle, Wash.

ROBINS DRY DOCK & REPAIR CO.
Erie Basin, Brooklyn
Marine Repairs

Tietjen & Lang Dry Dock Co.
Hoboken, New Jersey
Marine Repairs

Quintard Iron Works
742 East 12th Street, New York
Engineers Parson's Turbines Boiler Makers

Tebo Yacht Basin Co.
Foot of 23rd Street, Brooklyn
Shipbuilders Engineers Marine Repairs

Clinton Plant
Foot of Clinton Street, Brooklyn, N. Y.

White Fuel Oil Engineering Corporation
601 Washington Street, New York
The Most Up-to-Date System of Burning Fuel Oil Mechanically

Todd Dry Dock and Construction Corp.
Tacoma, Washington
Ship Building and Repairs

Todd Dry Docks, Inc.
Harbor Island, 16th Ave., S. W., Seattle, Washington
Ship Building and Repairs

Main Office
Todd Shipyards Corporation
15 Whitehall St., New York
Cable Address: Robin, New York Telephone 5600 Broad

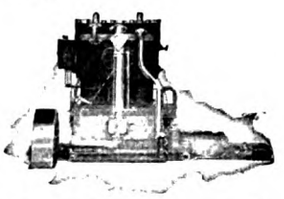
Generated on 2024-09-12 08:54 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

THE STANDARD ENGINE

Is the engine in all of the 80-ft. and 110-ft. British, French, Italian and U. S. Submarine Chasers.

Is respected by every seafaring man making Allied ports today.

Get latest data.



Back of the Standard Guarantee is the

Standard Motor Construction Company

120 Pine St., Jersey City, N. J.

JOHN E. HAND & SONS CO.

NAUTICAL INSTRUMENT MANUFACTURERS

CHARTS, BOOKS, FLAGS, COMPASS ADJUSTING

CONTRACTORS FOR COMPLETE NAUTICAL EQUIPMENT

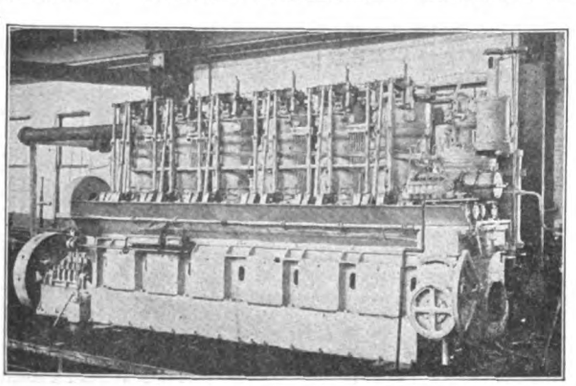
MAIN OFFICE, 208 CHESTNUT ST. PHILADELPHIA

WORKS, HADDONFIELD, N. J.

SALESROOMS:

PHILADELPHIA	208 CHESTNUT STREET
BALTIMORE	17 SO. GAY STREET
NORFOLK	114 W. PLUME STREET

HEAVY DUTY DIESEL TYPE MARINE ENGINES



640 I. H. P. Diesel Type Reversible Marine Engine as used on the Australian Commonwealth Government Line Motorships.

These MARINE ENGINES are the result of EIGHTEEN YEARS' stationary and marine DIESEL ENGINE EXPERIENCE and THIRTY YEARS EXPERIENCE in building the LARGEST and HIGHEST CLASS OF STEAM ENGINES.

These engines are built in the LARGEST and most COMPLETELY EQUIPPED PLANT in this country which is devoted EXCLUSIVELY to the building of Diesel Type Oil Engines.

SHIP OWNERS AND SHIPBUILDERS should avail themselves of these facilities.

SIZES AVAILABLE: 390, 640, 960, 1,300, 1,550 and 2,000 I. H. P.

ALL SIX CYLINDER, ALL FOUR CYCLE, and all directly REVERSIBLE.

McINTOSH & SEYMOUR

CORPORATION

149 Broadway, New York City. AUBURN, NEW YORK 815 Sheldon Bldg. San Francisco, Calif.

The Babcock & Wilcox Co.

NEW YORK and LONDON

Forged Steel

Marine Water-Tube Boilers

and

Superheaters

for

Naval Vessels **Merchant Steamers**
Ferry Boats **Yachts and Dredges**

These boilers hold the record for economy, capacity and endurance in the Navies of the World.

They have shown the same characteristics in the Merchant Marine. Babcock & Wilcox Boilers and Superheaters in one vessel are *saving more than 15 per cent.* over Scotch boilers in sister vessels.

Is a reduction in your coal bill of any interest to you?

Babcock & Wilcox Boilers have all essential parts heavier than corresponding parts in Scotch boilers, giving greater security against corrosion. They are lighter, safer, easier to clean and to operate than Scotch boilers, and much more efficient.

We are constantly receiving "repeat orders" from owners of merchant vessels who have had many years' satisfaction from the earlier installations.

Write us for details

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

MERCHANT SHIPBUILDING CORPORATION

SUCCESSOR TO

CHESTER PA. **Chester Shipbuilding Company** FOUNDED 1871

Limited

CHESTER, PA. **U. S. A.**

The disappearance of the Chester Shipbuilding Company, Limited, as a separate operating entity, does not mean that any of the things for which the name of Chester has come to stand disappear with it. The Chester Shipbuilding Company is no more, but the spirit of the Chester yard, which was the spirit of honest workmanship and pride in our craft inculcated by John Roach, "Father of American Steel Shipbuilding," and the Chester tradition, never more alive than today, are now the inspiration of a greater organization and the dominating influence in a larger field.

Please address all inquiries to the
Merchant Shipbuilding Corporation,
120 Broadway, New York City.

One Way Only—The Best Way—

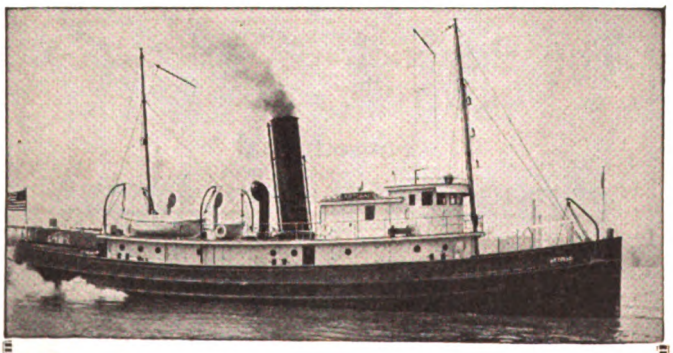
BUY!

WE SELL OUR SETS

Wireless for Ship and Land Stations

Cutting & Washington Radio Corporation

GENERAL OFFICES
6 and 8 West 48th Street
New York, N. Y.



THIS is the "Artisan," one of eight seagoing tugs built for the United States Shipping Board by the Davis Shipyard. She is 133 feet long, has a 1000 horse-power engine and two Scotch boilers. She is the 66th tug built by the Davis Yard. If you want the benefit of 39 years' experience in tug building, write

M. M. **DAVIS** & SON INC.

SOLOMONS, MD. 366 FIFTH AVE., N. Y.

Swartwout

STANDARDIZED
SHIP COWLS

DEVELOPED to meet the unprecedented need for speed in wartime ship construction, the Swartwout Standardized Cowl (patent applied for) is equally adapted for competitive building.

It enables the builder to specify a cowl complete with turning gear merely by name and size, being assured in return the highest grade sheet metal craftsmanship and a design which reduces skin friction to a minimum. Cowl and gears have been used by U.S. Shipping Board and Emergency Fleet Corporation.

Bulletin on request

The Ohio Body & Blower Co.
[Formerly]
The Ohio Blower Co.
CLEVELAND, OHIO U. S. A.

Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

A COMPLETELY EQUIPPED FOUR WAYS YARD

HULLS
ENGINES
BOILERS

AMES

DESIGNED
AND
BUILT

AMES SHIPBUILDING & DRYDOCK COMPANY
BUILDERS OF STEEL SHIPS
SEATTLE.

LOVEKIN PIPE JOINT
STRONGER THAN THE PIPE

LOVEKIN JOINTS ARE ABSOLUTELY SAFE

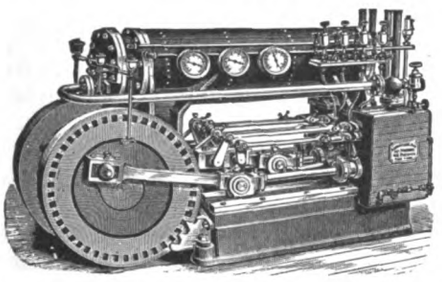
They are used in power piping in many plants and ships, and are not only the safest and strongest but economical to install and maintain.

Let us send you Catalog and quote you on our machines for operating on pipes to suit your requirements.

LOVEKIN PIPE EXPANDING & FLANGING MACHINE CO.

Philadelphia Bank Bldg. Philadelphia, Pa.

H. B. ROELKER
41 Maiden Lane, New York

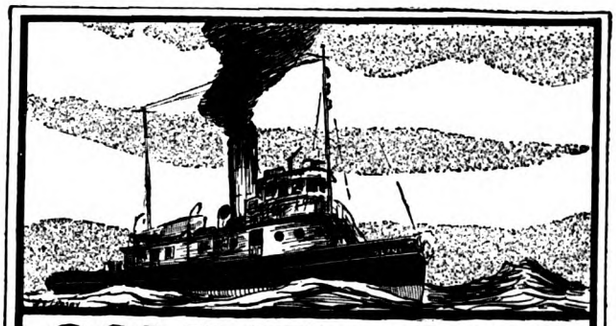


The Allen Dense Air Ice Machine

Contains no chemicals, only air at easy pressure (65 lbs.) in pipes. It is placed in the engine room and attended by the regular engineers, while meat room and ice-making box and galley and pantry refrigerators are at their usual places. Proven by many years' service in the Tropics on U. S. men-of-War, steam yachts and passenger steamers. It is as noiseless as any steam engine.

Steam Yachts: Electra, Nourmahal, May, Josephine, Virginia, Thespia, Dorothea, Felicia, Aloha, Attaquin, Nydia, Alcedo, Enterprise, Alvena, Margaret, Kanawha, Pantooset, Rheclair, Aztec, Lorena, Constant, Riviera, Czarina, Rambler, Apache, Surf, Guinevere, Atlanta, Cyprus.

About 300 are in active service on U. S. and foreign men-of-war, steam yachts, and merchant steamers in the Tropics.



COMMERCIAL CRAFT

SPECIALISTS

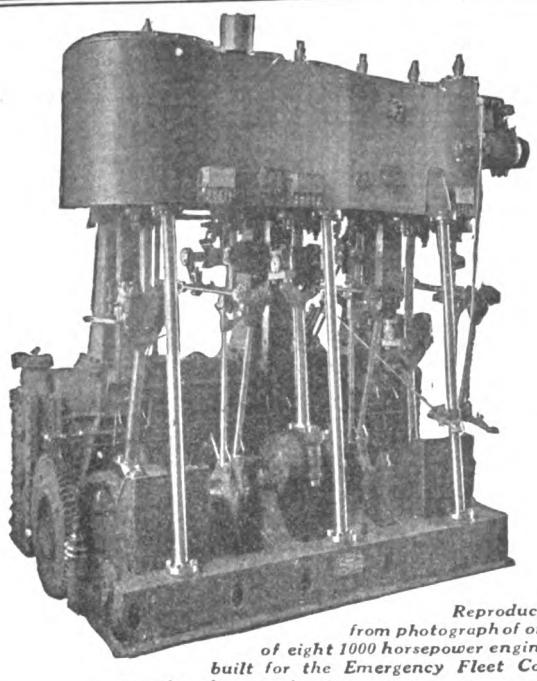
We design and build all types of craft and their propelling machinery.

If you are interested in a vessel under 300 feet length, get in touch with us.

Ways Now Open For Construction.

CONSOLIDATED
SHIPBUILDING CORPORATION
MORRIS HEIGHTS, NEW YORK CITY

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Reproduced from photograph of one of eight 1000 horsepower engines built for the Emergency Fleet Corporation for seagoing tugs.

U. S. Shipping Board Inspector reports to his home office: "The workmanship put out by Bay State Iron Works is above the average; they take pride in the appearance of their product when finished."

BAY STATE IRON WORKS CORP.

Shop at Erie, Penna. New York Office: 366 Fifth Ave

Important Notice To Subscribers

Our subscribers are requested to notify us immediately whenever they change their address. Otherwise they cannot keep their files unbroken. If subscribers move without notice to us, we cannot duplicate numbers already sent to their old addresses, as many times they are out of print.

MARINE ENGINEERING

6 EAST 39th STREET NEW YORK

WILMER H. JOHNSON, President — WARREN JOHNSON, Sec'y-Treas.-Mgr.

ELLIS J. STEARNS, Ass't Secretary

New York Office, 115 Broadway

EADS JOHNSON, Representative

THE JOHNSON IRON WORKS

LIMITED

New Orleans, Louisiana

Builders of

Tugs, Barges, River Steamboats

Construction Yard, Bayou St. John

Marine Repair plant with wharf and derrick facilities, situated on the Mississippi River at Algiers, La.

MR. SHIPBUILDER

You use large turnbuckles for temporary fastenings in the construction of ships and when making repairs. Each time a turnbuckle is used the workman must find a wrench or bar with which to turn the buckle. How much time does that workman lose while hunting that wrench or bar?

When the turnbuckle must be loosened the same proceedure must be used. More time lost.

No time lost when you use:

GRACEY'S IMPROVED

DOUBLE ACTING

RATCHET PULLING JACKS

It's Always Ready for Use.

For Quick Release, Knock Lock Link Off Hook.

Our new catalog tells all about it. The Emergency Fleet Corp. use our Jacks.

WHY NOT YOU?

MANUFACTURED ONLY BY

R. GRACEY & SONS COMPANY

113-115 FIRST AVE. PITTSBURGH, PA., U. S. A.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

You drive the screw holes with a hammer in any material.

The screw holes are made for wood screws or machine screws to fit all sizes of screws. The head is removed and you leave a permanent screw hole.

The Stine Screw Holes Co.

Manufacturers
WATERBURY, CONN., U. S. A.
DEPARTMENT 5

Once a Screw Hole, Always a Screw Hole

The Biggest Little Thing in the World

Some of the Reasons Why Screw Holes Will Be Bought and Used and Not Become Dead Stock for Anyone

1—They can be used without damage to receiving material.
2—They enable you to standardize to wood or machine screws in all material.
3—They are made of brass and will not rust under atmospheric or moisture conditions.
4—ECONOMY—They save more time value than the holes cost.
5—You get them for nothing and are paid for using them when you count time saved.
6—Screw holes have been needed ever since the first screw was used.
7—Special tools are NOT needed in using them in any material.
8—They can be used in any place a screw can be used.
9—By using screw holes, screws can be used in many places, and in many materials where it is impossible to use screws without them.
10—These are the only ready-made screw holes in the world.
11—No special screws are needed. These screw holes fit any wood screw or machine screw now in stock.
12—They make the neatest possible job in any material.
13—Every store where screws are sold must carry them in stock, because the line of screws is not complete without screw holes for them.
14—Every shop and factory where screws are used must also have these screw holes to fit the screws.
15—They are endorsed by all dealers in screws and by all users of screws.
16—Screw holes are entirely new and the world supply is yet to be furnished.
17—This is a progressive Old World of ours, and every active person in it must adopt all improved methods, and all new articles that will help him keep in the front line of progress.
18—Be among the first to stock up in screw holes if you are a dealer in screws.
19—Be among the first to install screw holes in your shop or factory, as you begin to save money soon as you use them.
20—In spite of the high cost of brass, screw holes are yet cheap.
21—We are letting the world know that screw holes can now be secured, by means of extensive advertising in all the principal Trade Journals that have the largest circulation among dealers in screws as well as users of screws.
22—Do not let your customer ask you for screw holes before you have them in stock. BE A LIVE WIRE.
23—They make everlasting holes in any material.
24—They mean "Plug-No-More" screw holes.
25—They are the result of Necessity being The Mother of Invention.
26—Anyone who can drive a nail can use screw holes.
27—Send for a sample and convince yourself.
28—Mechanics who see them say, "What do you think of that?"
29—In fact there are NO REASONS why screw holes should NOT be used.

Each of these reasons are enough to sell Screw Holes. There are many other reasons.

Write at once for our handsome **Color Card** showing screw holes in various materials which will be sent on request, together with samples and price list.

"Locks and latches For doors and hatches"

SKYLIGHT LIFTING GEARS
BRASS OUTSIDE AND INSIDE LOCK SETS
COMPLETE JOINER EQUIPMENT FOR CARGO SHIPS, TUGS AND BARGES

Send for Catalog

W. & J. TIEBOUT
118 Chambers Street, N. Y.

NOTICE

To Emergency Fleet Corporation Shipbuilders, Installing Turbine Units

The McNAB "LOGOMETER" is an instrument specially designed for, and is approved by, the Engineering Section of the Emergency Fleet Corporation for installation in the Engine Room under

TECHNICAL ORDER NO. 104

FOR PARTICULARS APPLY TO

The McNab Company, Bridgeport, Conn.

OR

Ford & Geirrine, San Francisco, Cal.

NECESSITY

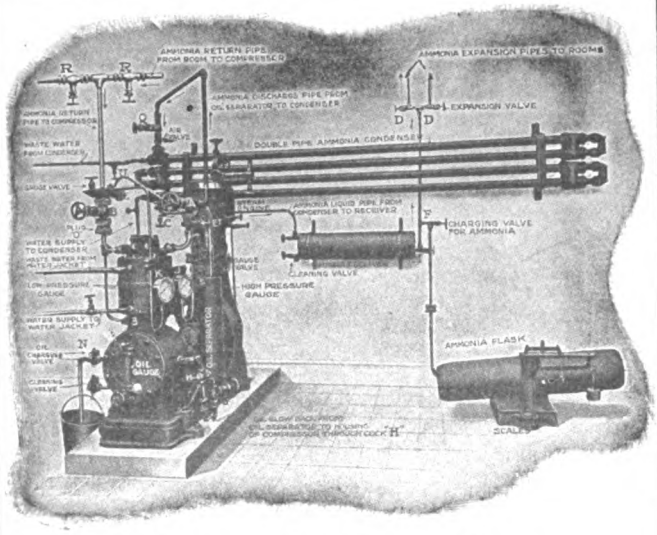
Just as long as men go down to the sea in ships to brave the whims and moods of the waves—just as long as civilization and business desire communication—bridges to far-flung frontiers and outposts—just as long as lightning-like thought intercourse is desirable between this or that place, so long will there be need for the dependability of K. C. Radio. As a hazard minimizer and a bridger of distance, this modern Mercury of Speed is unequaled in range, performance and ruggedness. Has the extra advantage of being sold outright—no bothersome, profit-draining tolls and royalties. Made in numerous models for both marine and land purposes. Our catalogs merit sending for.

Kilbourne & Clark

—the Big Word in the Wireless World

GENERAL OFFICES
Seattle, Washington; 149 Broadway, New York; Life Building, San Francisco—Cable Address: "KILBOURNE"

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN


AMMONIA RETURN PIPE FROM ROOM TO COMPRESSOR
AMMONIA EXPANSION PIPES TO ROOMS
AMMONIA DISCHARGE PIPE FROM OIL SEPARATOR TO CONDENSER
EXPANSION VALVE
DOUBLE PIPE AMMONIA CONDENSER
AMMONIA LIQUID PIPE FROM CONDENSER TO RECEIVER
CHARGING VALVE FOR AMMONIA
HIGH PRESSURE GAUGE
AMMONIA FLASK
OIL GAUGE

Marine Refrigeration

Remington Refrigerating Machines have been in use on Freight Boats, Oil Carriers, Colliers, Dredges, Transports, Passenger Steamers and Yachts for more than eighteen years, where they have proven their reliability for MARINE SERVICE.

Write for Bulletin No. 7-A and list of recent installations.

REMINGTON MACHINE CO.
Wilmington, Del.

Worthington Pump & Machinery Corporation

"EPPING-CARPENTER WORKS,
PITTSBURGH, PA."

Air and Circulating Auxiliary Condenser, Ballast—Bilge Sanitary—Fresh Water Scuttle Butt, Fire and Bilge.

The Pumps that Pump

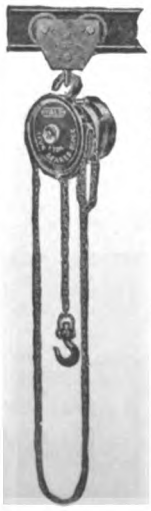
Oil Pump, Oil Cooler, Boiler Feed, Evaporator Feed.

Designed for Hard Usage, simple and economical operation, and long life.

PITTSBURGH, PA., U. S. A.
BRANCHES IN ALL PRINCIPAL CITIES

TRADE YALE MARK

The Costly Way — The Yale Way



The Yale Way is the One-Man Way

MANY delays in Shipping and Receiving Departments can be overcome with the installation of a Yale Chain Block and Trolley System.

One man with the Yale Chain Block and Trolley accomplishes the handling of loads quicker and safer than a gang of men.

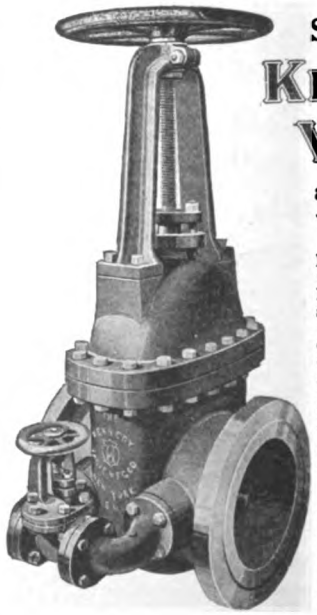
'From Hook-to-Hook-a-Line-of-Steel'

The new Yale 19D catalog shows you many ways to save money and increase production in your plant by using Yale Chain Blocks and Electric Hoists.

Let us send you your copy.

For a factory locking equipment use a Yale Master-Key System.

THE YALE & TOWNE MFG. CO.
Makers of the Yale Locks
9 East 40th Street New York City



Standardize on KENNEDY VALVES

and you will have a good variety to pick from

You can buy valves by haphazard choice, but the far-sighted engineer knows that a single valve accident or shut-down, or the cumulative expense of excessive repacking, or the cost of a new part and its installation, or the annoyance of constant leakage, usually make an inferior valve expensive, even if it could be had for nothing.

Included in our 500 types and sizes is a good line for all marine requirements, and usually a choice of several very satisfactory types for any given work.

Send for our catalog.

THE KENNEDY VALVE MFG. CO. ELMIRA, N.Y.

NEW YORK, 81 John St.
SAN FRANCISCO, 443 Rialto Bldg.
BOSTON, 47 India St. CHICAGO, 204-8 N. Jefferson St.
Sales Offices: El Paso, Philadelphia, Portland, Ore., Seattle, Winnipeg, Can., Salt Lake City

130

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

The Parsons Marine Steam Turbine Co., Ltd.

TURBINIA WORKS,

Wallsend-on-Tyne,

England.

Geared Turbines for all classes of Vessels.

Gears cut on the "Creep" System

Remarkably high economies obtained with Geared Turbine vessels in service.

2 Rector Street

DIXON'S ELDORADO

"the master drawing pencil"

inspires *confidence.*

It is dependable under the most trying conditions, under the most exacting demands.

The more difficult your work, the more you appreciate your ELDORADO.

Write for samples containing *your* favorite leads, and for the pencilogue, "Finding *Your* Pencil."

Made in 17 LEADS one for every need or preference

Joseph Dixon Crucible Co
Pencil Dept. 75-J, Jersey City, N.J.
Canadian Distributors
A. R. MacDougall & Co., Ltd., Toronto

DIXON'S "ELDORADO" the master drawing pencil - HB

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., required by the Act of Congress of August 24, 1912, of International Marine Engineering, published monthly at New York, N. Y., for October, 1919.

State of New York, County of New York, ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared E. L. Sumner, who, having been duly sworn, according to law, deposes and says that he is the Business Manager of International Marine Engineering, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher—Aldrich Publishing Co., 6 East 39th St., New York.

Editor—H. H. Brown, 6 East 39th St., New York.

Managing Editor—H. L. Aldrich, 6 East 39th St., New York.

Business Manager—E. L. Sumner, 6 East 39th St., New York.

2. That the owners are: (Give names and address of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) Aldrich Publishing Co., 6 East 39th St., New York; H. L. Aldrich, 6 East 39th St., New York; M. G. Aldrich, 6 East 39th St., New York.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: A. I. Aldrich, Manville, Rhode Island; A. E. Lord, Mt. Washington, Md.; George Slate, Summit, N. J.; H. H. Brown, 6 East 39th St., New York.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders, and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affidavit's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

E. L. SUMNER.

Sworn to and subscribed before me this 29th day of September, 1919.

James B. Thomas.
(My commission expires March 30, 1921.)

SEXTANTS

COMPASSES AND BINOCULARS

NAUTICAL INSTRUMENTS OF PRECISION

Marine Navigation is an exact science and due regard for safety requires Nautical Instruments of Precision.

Help the responsible Navigator by good selection of instruments.

We are sole distributors for Henry Hughes and Son, Ltd., of London, England, leading marine opticians for 104 years.

THE NATIONAL ANCHOR
HOLDS WELL—STOWS EASILY
COSTS LESS

A Standard of Excellence for seventeen years. During 1918 over 800 steamers were equipped with these anchors. Adopted by United States Shipping Board, Emergency Fleet Corporation. American Bureau of Shipping, Lloyds or Bureau Veritas test furnished. Tested up to twenty thousand pounds. prompt Delivery.

Chain, shackles, swivels, standing and running rigging, wire rope, hawsers, manila rope, canvas, blocks, tackle, cordage, marine hardware, etc.

THE UPSOM-WALTON CO.
JOHN H. ROYS
Special Representative
280 Broadway New York City

Generated on 2024-09-12 08:15 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

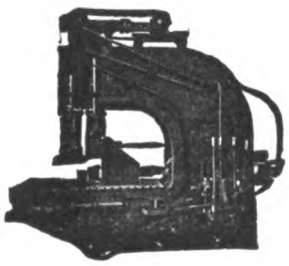
GENERAL WELDING & EQUIPMENT CO.
G.W.&E.CO.
107 MASS. AVE. BOSTON, MASS.

WELDING AND CUTTING EQUIPMENTS

HIGH QUALITY AND EFFICIENCY, LOW COST OF OPERATION AND MAINTENANCE, OPEN CONSTRUCTION, ACCESSIBILITY, AND EXCHANGEABILITY OF EVERY ESSENTIAL PART AND THE CONSIDERATE SERVICE WE FOLLOW UP WITH—HAS BUILT UP A REMARKABLE TRADE WITH THE MOST PROMINENT CONCERNS.

WRITE FOR OUR LATEST CATALOGUE ABOUT REGULATORS, CUTTING AND WELDING TORCHES.

CHAMBERSBURG
HYDRAULIC MACHINERY



Steam Hydraulic Forging Presses Hydraulic Riveters
Flanging Presses Accumulaters Cranes Pumps

STEAM HAMMERS
STEAM DROP HAMMERS, BOARD DROP HAMMERS
CHAMBERSBURG ENGINEERING CO.
Chambersburg, Penna.
SEND FOR CATALOG

THE MILWAUKEE CRANE

THE MILWAUKEE CRANE

SEND US YOUR INQUIRIES

STEEL GEARS, BRONZE SELF-OILING BEARINGS THROUGHOUT, ALL GEARS ENCLOSED, ACCESSIBILITY, MODERN SAFETY FEATURES, SUBSTANTIAL DESIGN, HIGH GLASS WORKMANSHIP, ENCLOSED BUSHINGS.

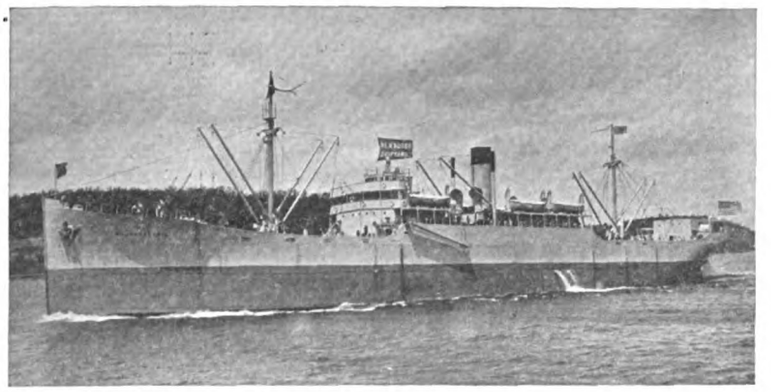
MILWAUKEE ELECTRIC CRANE & MFG. CO.
MILWAUKEE, WISCONSIN.
NEW YORK CHICAGO PITTSBURG DETROIT SEATTLE
BIRMINGHAM ST. LOUIS DENVER SAN FRANCISCO

The Mason No. 126 Improved Marine Reducing Valve

HAVE YOU SEEN
The Mason Improved Marine Reducing Valve?
CAN BE INSTALLED CLOSE TO DECK OR BULKHEAD
ACCESSIBLE SPRING
WRITE FOR CIRCULARS TODAY
MASON REGULATOR COMPANY
BOSTON SAN FRANCISCO MONTREAL

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



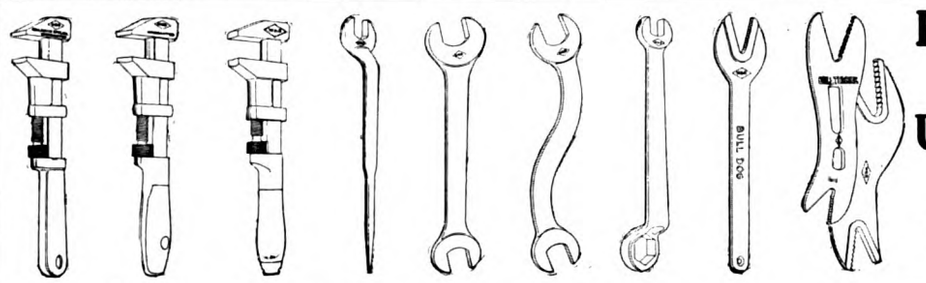
NEWBURGH SHIPYARDS Inc.

NEWBURGH

NEW YORK U. S. A.

SHIPBUILDERS

Building Berths for Vessels up to 12000 tons D. W.



Prompt Shipments
Complete Line
Unvarying Quality

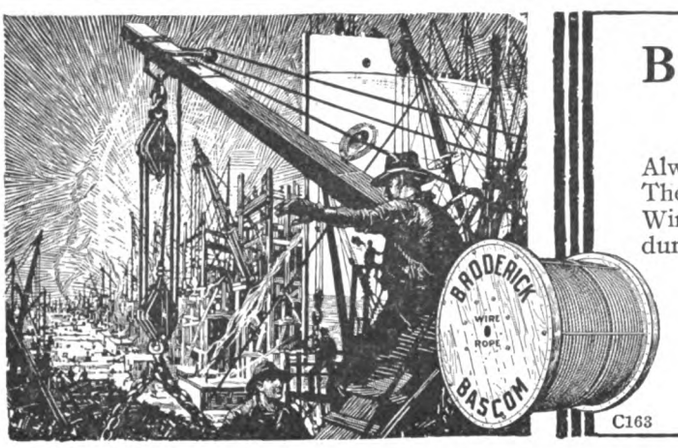
General Office: Akron, Ohio,
Factories: Akron, O., Chicago, Ill.,
St. Catharines, Ont.

W&B

Established **Whitman & Barnes** 66 Years

TWIST DRILLS — REAMERS — WRENCHES — DROP FORGINGS

Trade Mark Reg: U. S. Pat. Off.

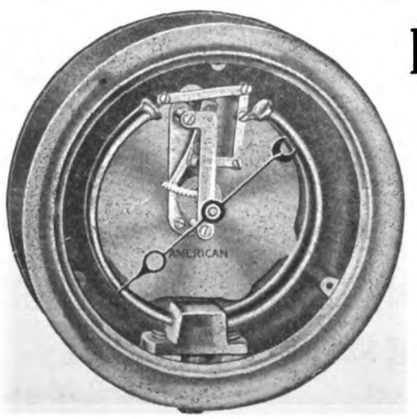


C163

Broderick & Bascom Wire Rope

Always dependable. Always economical. There's a certain inherent goodness in B. & B. Wire Rope that results in remarkable endurance—a very desirable quality when the life of the rope determines the ultimate cost. Get catalog No. 80.

BRODERICK & BASCOM ROPE CO.
ST. LOUIS, MO.
New York City Seattle



BEST FOR THE LONG VOYAGE

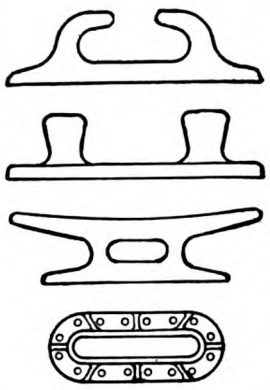
AMERICAN Gauges, Pop Safety and Relief Valves, Whistles, Engine Indicators, Ideal Steam Traps, Feed Water Grease Extractors

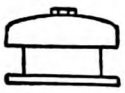
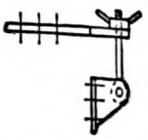
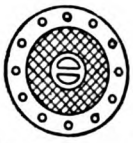
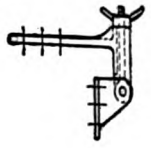
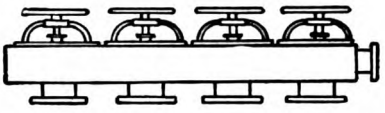
Catalog on Request

AMERICAN STEAM GAUGE & VALVE MFG. CO.

New York Chicago Boston Atlanta Pittsburgh

Generated on 2024-09-12 08:23 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

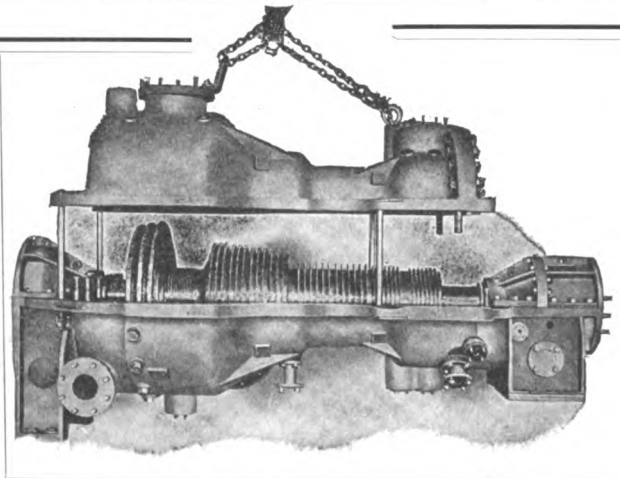


DECK AND HATCH FITTINGS
SPECIAL FORGINGS AND CASTINGS
STEVENS AYLSWORTH CO., Inc.
254 Broadway New York City
If you are "rushed"; send us a pencil sketch for estimating

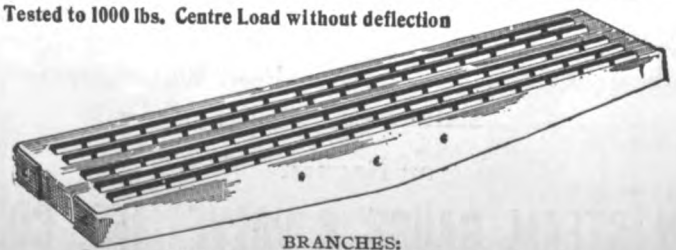
HERMASTIC
gives durable protection

BITUMINOUS COATINGS
FOR
BILGES, TANK TOPS, COAL BUNKERS, INNER BOTTOM TANKS, FLOORS, PEAKS, REFRIGERATING SPACES
AMERICAN BITUMASTIC ENAMELS COMPANY
17 BATTERY PLACE, NEW YORK
PHILADELPHIA CLEVELAND



HALLIDIE COMPANY
MANUFACTURERS OF
Parsons Marine Steam Turbines
SPOKANE, WASHINGTON

UNIVERSAL SAFETY LADDER TREAD
Tested to 1000 lbs. Centre Load without deflection
(Girder Type with *Lead* Inserts)



FOR SHIPS
Suitable for Naval and other Vessels, and Industrial purposes.
LIGHT, DURABLE, RUSTPROOF
Universal Safety Tread Company
40 Court Street Boston, Mass.
SEND FOR CATALOGUE F.

BRANCHES:
PHILADELPHIA, PA. 417 Widener Building
SEATTLE, WASH. 332 Pioneer Bldg.
CHICAGO, ILL. 618 West Jackson Boulevard
NEW YORK, N. Y. 120 Liberty Street
SAN FRANCISCO, CAL. 76 Sacramento Street
DETROIT, MICH. 913 Dime Bank Building

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Hot Galvanized or Self Colored

Straight or Countersunk Hole

MALLEABLE IRON CLINCH RINGS

Our method of galvanizing does not weaken the rings or make them brittle.

MALLEABLE IRON FITTINGS CO., Branford, Conn.

BOAT NAILS

Folding Anchors

Row Locks Boat Hooks

Boat Cleats

Malleable and Steel Castings

Custom Galvanizing and Machining

MALLEABLE IRON FITTINGS CO., Branford, Conn.

"Wire your ships against fire"

TRADE FDW SYSTEM MARK

AUTOMATIC FIRE ALARM

Fire Detecting Wire Co., Inc.

2 West 45th Street New York

Telephone 3526 Vanderbilt

P. S. THORSEN & CO., INC.

STEAM PIPE AND BOILER COVERINGS

BRINE AND COLD STORAGE WORK

TELEPHONE 3081 HAMILTON

81 COFFEY STREET BROOKLYN

Using Thermit Around the Drydock

Repairs Large and Small Can Be Made Economically by the Thermit Process

Broken stern frames, rudder frames, connecting rods, rudder stocks, crank shafts, tail shafts, and many other similar sections can be repaired very quickly and easily with Thermit.

A stern frame can be welded in place without keeping the vessel out of service more than two or three days.

Worn rudder stocks can be built up or new sections can be welded on.

Write for Pamphlet No. 3425, which gives full particulars.

If you are in a hurry, wire or telephone our nearest office.

METAL & THERMIT CORPORATION, 120 Broadway, New York

329-333 Folsom St., San Francisco
7300 So. Chicago Ave., Chicago
1427 Western Ave., Pittsburg, Pa.
15 Emily Street, Toronto, Ont.

Standard Underground Cable Co.
Pittsburgh, Pa.
We solicit your inquiries for:
Copper, Brass, Bronze, Wires, Rods,
Copper and Brass Tubes,
Colonial Copper Clad Steel Wire,
Insulated Wires of all kinds,
Lead Covered and Armored Cables,
Cable Accessories of all kinds.
Branch Offices
New York Philadelphia Chicago
Boston San Francisco St. Louis

"CINCINNATI ELECTRICS"

Made in 7 Sizes; ¼ to 2 in. Capacities. Ball and end thrust bearings. All working parts hardened. Single and two speeds.

Screw Feed Drills and Portable Radials. Also complete line of Tool Post Grinders and Bench Grinders.

Hand or Breast Drills

Catalog 97

The Cincinnati Electrical Tool Co.

Cincinnati, Ohio

GEORGE OLDHAM & SON CO.

FRANKFORD. PHILADELPHIA, PA.

Pneumatic Tools of Merit for Shipbuilding

Chipping and Riveting Hammers

Calkers and Holder-Ons

Combination Riveters and Holder-Ons for bucking up and close quarter riveting

TOOLS SENT ON APPROVAL

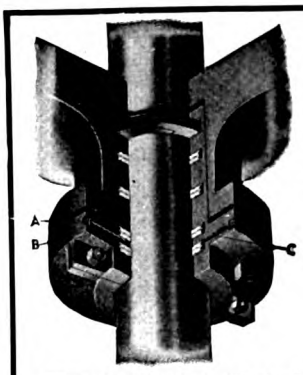
When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

PENN SEABOARD STEEL CORPORATION

Franklin Bank Building
PHILADELPHIA, PA.
New York Office, 111 Broadway

STEEL CASTINGS
STEEL
PLATES
SHIP ANCHORS



FRANCE
Marine Type
Metallic Packing
For All
Conditions of Service

FRANCE PACKING COMPANY
TACONY—PHILA., PENNA.

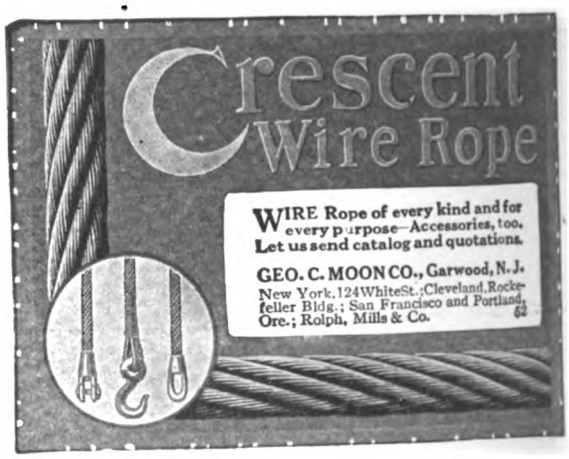
NEWPORT NEWS SHIPBUILDING AND DRY DOCK COMPANY
WORKS AT NEWPORT NEWS, VA. (On Hampton Roads)

Equipped with three large Basin Dry Docks of the following dimensions:

	No. 1	No. 2	No. 3
Length on Top	610 feet	827 feet	558 feet
Width on Top	130 "	162 "	147 "
Width on Bottom	50 "	80 "	62 "
Draught of Water over Sill	25 "	30 "	24 "

SHOPS are equipped with modern machinery capable of doing the largest work required in ship construction. Tools driven by electricity and compressed air used in constructing and repairing vessels. For estimates and further particulars address

NEWPORT NEWS SHIPBUILDING & DRY DOCK COMPANY
233 Broadway, New York City or Newport News, Va.


Crescent
Wire Rope
WIRE Rope of every kind and for every purpose—Accessories, too. Let us send catalog and quotations.
GEO. C. MOON CO., Garwood, N. J.
New York, 124 White St.; Cleveland, Rockefeller Bldg.; San Francisco and Portland, Ore.; Rolph, Mills & Co.
62

DEPENDABLE PERFORMANCE

Day in and day out, is what you get from

"MORSE" TOOLS

Morse Twist Drill & Machine Company
New Bedford, Mass., U. S. A.

LANE LIFE BOATS

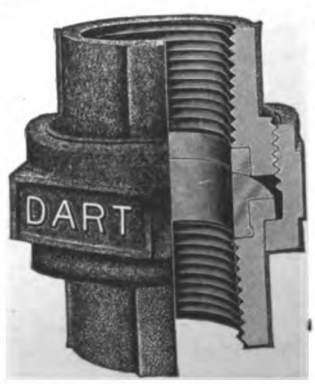
LAST LONGEST

BALTIMORE DRY DOCKS AND SHIP BUILDING COMPANY
BALTIMORE, MD.

Equipped with two large basin dry docks of the following dimensions:

	No. 1	No. 2
Length on Keel Blocks	610 ft.	437 ft.
Width of Dock on Floor	62 "	52 "
Depth of water over sill at low water	22½ "	22½ "

STEAMSHIP REPAIRS A SPECIALTY



Two Bronze Spherical Seats in combination with Malleable Pipe Ends give the

DART UNION

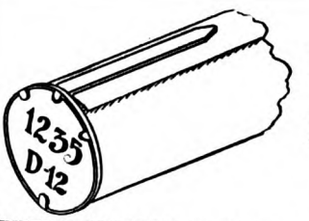
a distinctive feature which has been unequaled. It is the acknowledged leader.

E. M. DART MFG. CO.
Providence, R. I.
THE FAIRBANKS CO. & BRANCHES, Distributors
Canadian Factory
DART UNION CO., Ltd., Toronto

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

THOS. WYATT MFG. CO.
BOSTON, MASS.

MANUFACTURERS
All Sizes of Crane, Quarry, Railroad and Ship Chains, and Chain Hoists.



THE
ULRICH INDEX CLIP
FOR
ROLLED DRAWINGS
SAVES
TIME AND TROUBLE

INDEXES THE ROLLS ON THE ENDS AND PREVENTS UNROLLING

In the standardization of your drawings in a multiple of sizes and the installation of an economic and efficient filing system, it is necessary to provide some means for taking care of the old rolled drawings. The Index Clip solves this problem. Try it.

ULRICH PLANFILING EQUIPMENT CO., JAMESTOWN, N. Y.

Howard Ship Yards & Dock Co.
Jeffersonville, Ind., U. S. A.

Established 1834—Oldest Continuously Operated Ship Yard in America.

Builders and Designers of Water Craft of Every Description up to 3000 tons. D. W. Capacity

Galvanized and Black Steel Boats and Barges for Latin American Trade a Specialty.

Drawings and Estimates Furnished.

POWER BENDERS
THREE
NEW MODELS

"Wonder" Pipe Bending Machines (pat.) electrically operated to bend from 1 inch to 18 inch. Send for printed matter. We also manufacture TEN other sizes, hand operated, to bend from ⅛ inch to 8 inch.

American Pipe Bending Machine Co. 99 PEARL STREET, Boston, Mass., U.S.A.

STEWARD DAVIT & EQUIPMENT CORPORATION
17 BATTERY PLACE, NEW YORK CITY
Telephones {6679 Rector / 1679 "

Manufacturers of

Mechanical Chock Fittings, which "releasably" support the boat and lashings and are so arranged as to permit of instantaneous release from the deck.

Mechanical Davits, which pick the boat up from the deck and swing it clear of ship's side in a few seconds.

Mechanical Falls Gear, which lowers the boat into the water **on an even keel;** one man only operates this gear.

Mechanical Boat Release, which releases the boat from the falls instantaneously and **both ends simultaneously;** one man operates release.

Ashton Pop Safety Valves
Single or Duplex
The Quality Standard
No. 16 Style

Ashton Pressure Gages
Plain and Recording
The Accuracy Standard
Marine Valve

THE ASHTON VALVE CO., BOSTON, U. S. A.
New York St. John's House, London, Eng. Chicago

MOST SERVICEABLE IN THE LONG RUN
MARTELL
METALLIC PACKINGS
ONCE TRIED — ALWAYS USED
LET US SHOW YOU
WRITE US
MARTELL PACKINGS CO.
ELYRIA, OHIO

EASTERN REP.
WALTER S. HAZLETT
2069 EAST DAUPHIN ST.
PHILA., PA.

PACIFIC COAST
FORD & GEIRRINE
MERCHANTS EXCHANGE BLDG.
SAN FRANCISCO, CAL.

Steamers Motorships Schooners

Plans and Specifications prepared for Steel and Wooden Vessels of all types and sizes.

COX & STEVENS
Naval Architects Marine Engineers
15 WILLIAM STREET, NEW YORK
Telephone 1375 Broad

A large number of vessels ranging from 4,000 to 400 tons deadweight from our designs and specifications are today in successful operation; many others under construction.

Generated on 2024-09-12 08:17 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ZINC BOILER PLATES

THE EDES MANUFACTURING COMPANY
PLYMOUTH, MASS.

Ross

Surface Barometric and Jet Condensing Equipments for Power Plants.
Main, Auxiliary, Distilling Condensers and Evaporators for Marine Service.
Distilling Condensers for Refrigeration and Chemical Plants.
"Crosshead Guided" Expansion Joints.
Ross Boiler Feed Water Heaters.
Ross Oil & Sugar Juice Heaters.
Gravity and Forced Circulation Heaters.
Ross Oil, Air and Water Coolers.

ROSS HEATER & MFG. CO., Buffalo, N. Y.

THE BRAND THAT LEADING ENGINEERS DEMAND

GEORGE B. GRANGER, President ALBERT R. BORDEN, Vice-President
JOSEPH P. HANRAHAN, Sec'y.-Treas.

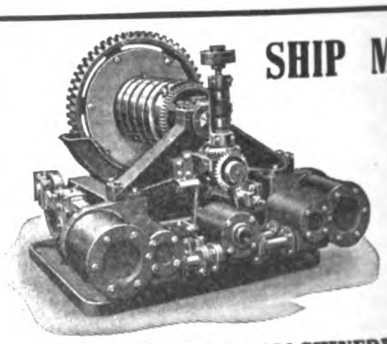
GEORGE B. GRANGER COMPANY Inc.
66 BROADWAY NEW YORK CITY
Telephone, Rector 4574

ROPE, WIRE ROPE and BINDER TWINE
"GRANGER" 100% Pure Manila Rope
"CRESCENT" Wire Rope
"MAPLE LEAF" Binder Twine

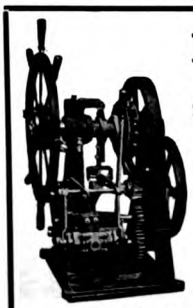
Shipbuilding Cranes
Steel Barges
Steel Tow-Boats
Steel Derrick Boats

DRAVO CONTRACTING CO.
(Engineering Works Dept.)
ADDRESS INQUIRIES TO
DRAVO-DOYLE CO.
PITTSBURGH, PA.
Cleveland, Philadelphia, Chicago, Indianapolis, San Francisco

U. S. METALLIC PACKINGS
for Marine Engine Piston Rods and Valve Stems
THE U. S. METALLIC PACKING CO.
PHILADELPHIA
NEW YORK - 30 CHURCH STREET

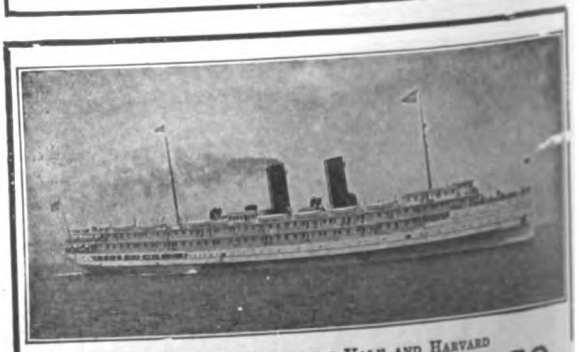


SHIP MACHINERY
Winches, Steering Engines, Capstans and Windlasses. Newly designed, high efficiency line. They are "Built Right and Run Right." Printed matter on request.
AMERICAN CLAY MACHINERY CO., Bucyrus, Ohio
H. D. VanDoorn, Mgr. Marine Dept.
516 Liberty Building, Philadelphia, Pa.



Dake Engine Co., Grand Haven, MICH., U.S.A.
MANUFACTURERS OF
STEAM STEERING GEARS, CAPSTANS, ANCHOR WINDLASSES, MOORING HOISTS, SPUD HOISTS, DRILL HOISTS. CONTRACTORS' EQUIPMENT, &c.

Sales Agents:
New York: H. L. DRULLARD
30 Church Street
Chicago; J. E. CHRISHOLM & CO., Ltd.
741 Monadnock Block
Write for Catalog



TURBINE STEAMSHIPS YALE AND HARVARD
W. & A. FLETCHER CO.
PARSONS' MARINE TURBINES
Marine Engines, Boilers and Machinery of all Kinds
Contractors for Vessels Complete. HOBOKEN, N. J.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

PROFESSIONAL CARDS

JOHN L. BOGERT

165 BROADWAY, NEW YORK CITY

Internal Combustion Engine Specialist

ENGINEER TO

AMERICAN KRUPP SYSTEM DIESEL ENGINE CO.

NEW YORK ENGINE COMPANY

A. H. BRENZINGER

Naval Architect, Yacht and Ship Broker

VESSELS DESIGNED AND BUILT

Plans, Specifications and Estimates Furnished for All Types of Vessels

Phone Stuyvesant 7939 41 Union Square, Cor. 17th Street, New York

J. L. JACOBS & COMPANY

Industrial Engineers

Monadnock Bldg., Chicago 55 Liberty St., New York

Shipbuilding Cost and Production Control Methods
Organization — Industrial Relations — Management

THEODORE E. FERRIS

Naval Architect and Marine Engineer

Hudson Terminal Building, 30 Church St.

'Phone, 2786 Cortlandt. :: New York

Plans, Specifications and Superintendence, Steamships, Steamboats, Tugs, Etc.

ROBERT S. HAIGHT

J. MCDONALD E. G. CLAYTON G. B. HARGAN

Ship and Engineer Surveyor, Consulting Engineer

SUPERVISION, APPRAISALS, EXPERT TESTIMONY

DEADWEIGHT AND CUBIC

BOWLING GREEN 6438 17 STATE STREET, NEW YORK

LEONARD B. HARRIS

Consulting Engineer Naval Architect

43rd Floor Woolworth Building, New York

EDWARD S. HOUGH

Consulting Engineer. Marine Surveyor.

ENGINE SURVEYOR TO THE BUREAU VERITAS INT. REGISTER

Hough's improved hull construction specially suitable for lumber and passenger steamers using fuel oil.

Hough's patent noiseless boiler feed check valves used by leading steamship owners and builder

PROFESSIONAL CARDS

ARTHUR F. JOHNSON,

Naval Architect Marine Engineer

DESIGNS, SUPERVISION, CONSULTATION

535 Cass Street, Milwaukee, Wis.

Consulting Naval Architect and Production Engineer for The Fabricated Ship Corporation.

LESLIE-STEVENS CO., Inc.

Consulting Contracting

SPECIALISTS IN MODERN ELECTRICAL AND MECHANICAL EQUIPMENT OF YARDS AND DOCKS — REVAMPING

"SAFETY FIRST" INSTALLATIONS A SPECIALTY

120 BROADWAY NEW YORK

HENRY LYSHOLM

Consulting Engineer and Naval Architect

SHIPYARDS, SHOPS, AND VESSELS DESIGNED, AND CONSTRUCTION SUPERVISED.

1123 PHILA. STOCK EXCHANGE BLDG. PHILADELPHIA, PA.

PHONE BOWLING GREEN 6077

N. E. McCLELLAND & CO., LIMITED

Naval Architects, Ship Brokers Marine Engineers and Surveyors

Montreal Office
Imperial Bank Chambers

2 STONE STREET
NEW YORK

Marine Surveying and Adjusting Co.

R. L. MUIR AND ASSOCIATES

CONSULTING ENGINEERS, NAVAL ARCHITECTS, GENERAL AVERAGE ADJUSTERS, EXPERT TESTIMONY APPRAISALS

33 BROADWAY NEW YORK CITY

LEONARD J. NILSON

BALTIMORE, MD.

Naval Architect and Marine Engineer

25 Years' Experience in Designing Yachts and Commercial Vessels

Designer of Sail Power and Steam Vessels

J. MURRAY WATTS

Member of Society of Naval Architects and Marine Engineers

136 South Fourth St. Philadelphia, Penna.

Plans and Specifications furnished for seagoing and inland waterway types of commercial vessels. Also for steam and sailing yachts and motor boats.

PHONE: LOMBARD 2072 CABLE ADDRESS: MURWAT

SAMSON Solid Braided Cord. All sizes. For log lines, lead lines, halyards, tiller rope on motor boats, hand rails, etc.

Will not stretch, kink or ravel like twisted rope, and wears longer. ALL SAMSON Cord is guaranteed free from imperfections. Send for sample and catalogue.

SAMSON SPOT CORD

SAMSON CORDAGE WORKS
Boston, Mass.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:23 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

KINGSBURY

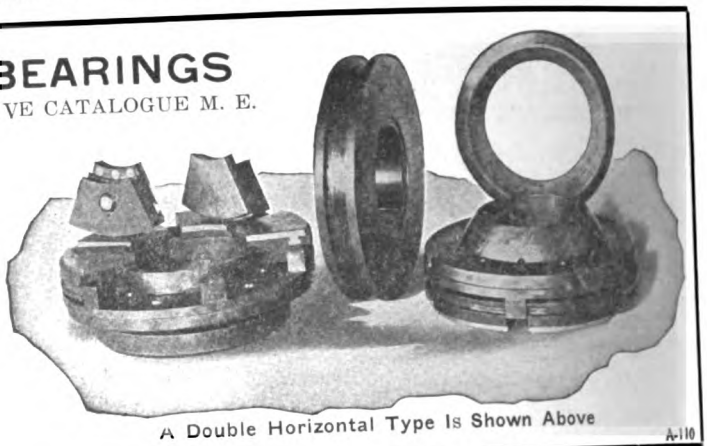
PATENTED

MINIMUM FRICTION LOSS.

THRUST BEARINGS

SEND FOR DESCRIPTIVE CATALOGUE M. E.

Self Oiling Type or Gravity Feed Type Furnished as Required.



A Double Horizontal Type Is Shown Above

A-110

End Thrust Problems need not be avoided. Kingsbury Thrust Bearings are durable and are more efficient than Journal Bearings.

ALBERT KINGSBURY, ENGINEER

OLIVER BUILDING PITTSBURGH, PA.

Bound Volumes of Marine Engineering

Every month's issue of MARINE ENGINEERING contains much valuable information and should be kept at hand for ready reference.

A bound volume gives you the key to what has been accomplished in the Marine Field during the year.

Many of these volumes (from 1897 to 1918) are out of print. We sell those in stock for $5.00 each.

MARINE ENGINEERING ∴ ∴ 6 East 39th Street, New York

R.I.W. REMEMBER IT'S WATERPROOF REG U.S. PAT. OFF.

PROTECTIVE PRODUCTS

Their unfailing reliability has been proved by successfully combating the destructive influence of the elements, salt water and marine growths in all parts of the world.

These products include a special salt water-resistant coating for hulls below the water line.

"R. I. W." Tockolith (Patented), a quick-drying anti-corrosive cement paint for priming iron and steel to prevent chemical and electrolytic corrosion. Can be used with equal success on the inside of steel hulls.

"R. I. W." Anti-Fouling Paint, to prevent fouling by barnacles, moss, gross and other marine growths.

"R. I. W." Liquid Knokerit (Patented). A heavy flat finish paint used extensively for protecting concrete subject to atmospheric exposure. Admirable for use on hulls, above the water line.

"R. I. W." Battleship Gray. A finishing coat, in light and dark shades, for use on wood, steel and concrete.

"R. I. W." Cement Floor Paint (Patented). A deck and floor paint of great durability, resiliency, and resistance to wear, water and salt atmosphere.

Also spar varnishes, smoke stack paint, concrete waterproofing paints and compounds, enamels, and paints and allied products made in the formulae of the U. S. Government.

Ask for descriptive literature, Dept. 36.

TOCH BROTHERS

Technical and Scientific Paint Makers since 1848

320 Fifth Avenue, New York

Works: Long Island City, N. Y. & London, Eng.

Important Notice to Subscribers

Our subscribers are requested to notify us immediately whenever they change their address. Otherwiee they cannot keep their files unbroken, If subscribers move without notice to us, we cannot duplicate numbers already sent to their old addresses, as many times they are out of print.

MARINE ENGINEERING

6 EAST 39th Street NEW YORK

WOOLLEY MECHANICAL OIL BURNING SYSTEM

E. L. WOOLLEY & CO.

434 INDUSTRIAL TRUST BLDG.

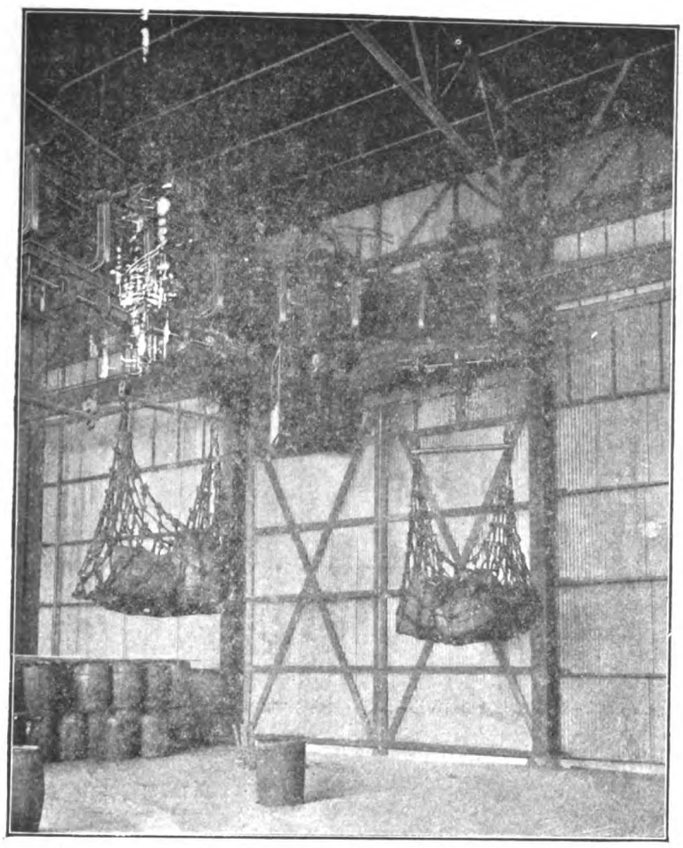
PROVIDENCE, R. I.

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



USE THE OVERHEAD SPACE

in terminal sheds to help out the movement of freight.

The following are some features of the Conveyor Train of the SPRAGUE ADJUSTABLE LOOP SYSTEM.

The two hoisting units under control of one operator economizes both space and time.

The two-hook arrangement on each unit keep the loads from swinging.

The traverse movement is at the highest practicable speed, and the trucks are of the simplest and most rugged construction.

Two or more trains operated on the closed adjustable loop track.

Send for Bulletin No. 48713.

SPRAGUE ELECTRIC WORKS

Main Offices 527 W. 34th St. New York. Of General Electric Company Branch Offices In Principal Cities

BUYER'S DIRECTORY

ACCESSORIES, BOAT
(See Boat Accessories)

ACCESSORIES—ELECTRIC CABLE
Standard Underground Cable Company, Pittsburgh, Pa.

ACETYLENE APPARATUS
(See Oxy-Acetylene Welding & Cutting)

ACETYLENE—DISSOLVED
Linde Air Products Co., The, 30 E. 42nd St., New York
Morse Dry Dock & Repair Co., Brooklyn, N. Y.

ACCUMULATORS, HYDRAULIC
Chambersburg Engineering Company, Chambersburg, Pa.
Niles-Bement-Pond Company, 111 Broadway, New York
Watson-Stillman Company, 50 Church Street, New York

ADJUSTABLE SPROCKET RIMS
Babbitt Steam Specialty Company, New Bedford, Mass.

AIR AND CIRCULATING PUMPS
Davidson Company, M. T., 154 Nassau Street, New York

AIR AND COMPRESSOR PUMPS
(Combined)
Davidson Company, M. T., 154 Nassau Street, New York
Dean Bros., Steam Pump Works, Indianapolis, Ind.
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
Williams, Wm. E., 62 Front Street, New York
Worthington Pump & Machinery Corp., 115 Broadway, New York

AIR COMPRESSORS
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Fairbanks, Morse & Company, 900 S. Wabash Ave., Chicago, Ill.
Independent Pneumatic Tool Company, 600 West Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Norwalk Iron Works, South Norwalk, Conn.
Williams, Wm. E., 62 Front Street, New York
Worthington Pump & Machinery Corp., 115 Broadway, New York

AIR CONDITIONING
Sturtevant Co., B. F., Hyde Park, Boston, Mass.

AIR COUPLINGS
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.
National Tube Company, Frick Building, Pittsburgh, Pa.
Oldham, George & Son Co., Frankford, Philadelphia, Pa.

AIRCRAFT APPARATUS
Gwilliam Company, The, 253 West 18th Street, New York
Sperry Gyroscope Company, Brooklyn, New York

AIR DRILLS
(See Pneumatic Tools)

AIR HAMMERS
(See Pneumatic Tools)

AIR HOISTS
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Dake Engine Company, Grand Haven, Mich.
Great Lakes Engineering Works, Detroit, Mich.
Independent Pneumatic Tool Company, 600 West Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company 11 Broadway, New York

AIR HOSE
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Goodyear Tire & Rubber Co., Akron, Ohio
Independent Pneumatic Tool Company, 600 West Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.
Oldham & Son Co., Geo., Frandford, Philadelphia, Pa.
United States Rubber Company, 1790 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

AIR HOSE FITTINGS
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Keller Pneumatic Tool Company, Grand Haven, Mich.

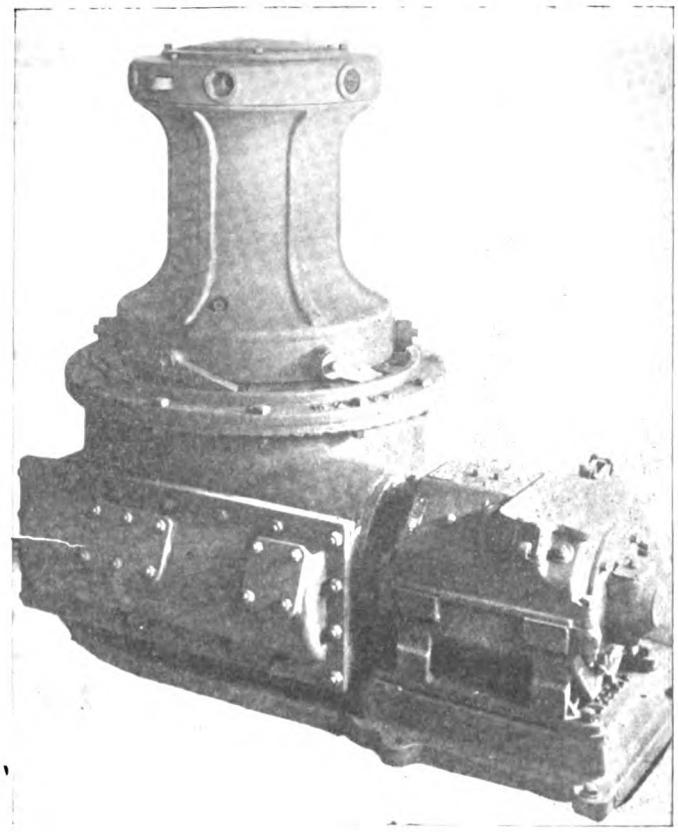
AIR MOTORS
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Dake Engine Company, Grand Haven, Mich.
Independent Pneumatic Tool Co., 600 West Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.

AIR PLANERS
(See Pneumatic Planers)

AIR PORTS
Cory & Son, Charles, 290 Hudson Street, New York
Dake Engine Company, Grand Haven, Mich.
McNab Company, The, Bridgeport, Conn.
Rostand Manufacturing Company, Milford, Conn.
Sands, A. B., & Son Co., 22 Vesey Street, New York
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Tiebout, W. & J., 118 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

AIR PUMPS
Alberger Pump & Condenser Co., 140 Cedar Street, New York
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Davidson, M. T., Co., 154 Nassau Street, New York
Dean Bros. Steam Pump Works, Indianapolis, Ind.

Generated on 2024-09-12 08:59 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Strong, Rigid, Compact, Accessible, Water-Proof

The worm, worm-shaft, and bearings are all contained in a single unit bolted to the side of the main casting, and can be easily removed without disturbing the rest of the machine.

Let us quote you on this 20 H. P. Capstan. Its capacity is 15,000 pounds at 25 ft. per minute.

THE
Maine Electric Co.,
Manufacturers of
"MELCO" MARINE AUXILIARY MACHINERY
PORTLAND, MAINE

Epping-Carpenter Pump Co., Pittsburgh, Pa.
Ingersoll-Rand Company, 11 Broadway, New York
Ross Heater & Mfg. Co., Buffalo, N. Y.
Schutte & Koerting Company, 12th & Thompson Streets, Philadelphia, Pa.
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
Wheeler Manufacturing Co., C. H., Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York
Worthington Pump & Machinery Corporation, 115 Broadway, New York

AIR PUMPS—VERTICAL TWIN BEAM
Davidson Company, M. T., 154 Nassau Street, New York

AIR SEPARATORS
Griscom-Russell Company, 90 West Street, New York

AIR VALVES
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Powell Company, The William, Cincinnati, Ohio

AIR WASHERS
Spray Engineering Company, Boston, Mass.
Stevens-Aylsworth Co., Inc., 253 Broadway, New York

ALARMS
(See Water Gauges and Alarms)

ALCOHOL ENGINES
Standard Motor Construction Company, 120 Pine Street, Jersey City, N. J.

ALUMINUM CASTINGS
(See Castings, Aluminum)

AMMETERS
(See Electrical Instruments)

AMMONIA FITTINGS
Frick Company, Waynesboro, Pa.
Williams, Wm. E., 62 Front Street, New York
York Manufacturing Company, York, Pa.

AMMONIA PACKING
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
France Packing Company, Tacony, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

AMMONIA VALVES
Frick Company, Waynesboro, Pa.
York Manufacturing Company, York, Pa.

ANCHORS
Admiral Anchor Co., Franklin Bank Bldg., Philadelphia, Pa.
American Engineering Company, Philadelphia, Pa.
American Steel Foundries, McCormick Building, Chicago, Ill.
Baldt Anchor Company, Chester, Pa.
Malleable Iron Fittings Company, Branford, Conn.
McNab Company, The, Bridgeport, Conn.
Penn Seaboard Steel Corporation, Franklin Bank Bldg, Philadelphia, Pa.
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Topping Brothers, 122 Chambers Street, New York
Upson-Walton Company, 280 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

ANCHOR TRIPPERS
American Engineering Company, Philadelphia, Pa.

ANGLE FURNACES
(See Oil Furnaces)

ANGLE VALVES
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Crane Company, 836 So. Michigan, Avenue, Chicago, Ill.
Kennedy Valve Mfg. Company, Elmira, N. Y.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Watson-Stillman Company, 50 Church Street, New York
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

ANNUNCIATORS
(Water-tight)
Bryant Electric Company, Bridgeport, Conn.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Edwards & Company, Inc., 140th & Exterior Streets, New York

ANTI-CORROSIVE PAINT
(See Anti-Rust Coatings)

ANTI-RUST COATINGS
American Bitumastic Enamels Company, 17 Battery Place, New York
Dixon, Joseph, Crucible Company, Jersey City, N. J.
duPont deNemours & Co., E. I., Wilmington, Del.
Ferdinand, L. W., & Co., 152 Kneeland Street, Boston, Mass.
International Compositions Co., 18 Broadway, New York
Toch Brothers, 320 Fifth Avenue, New York

ANVILS
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

ARCHITECTURAL IRON
Page Steel & Wire Company, 30 Church Street, New York

ARBORS
Whitman & Barnes Mfg. Company, Akron, Ohio

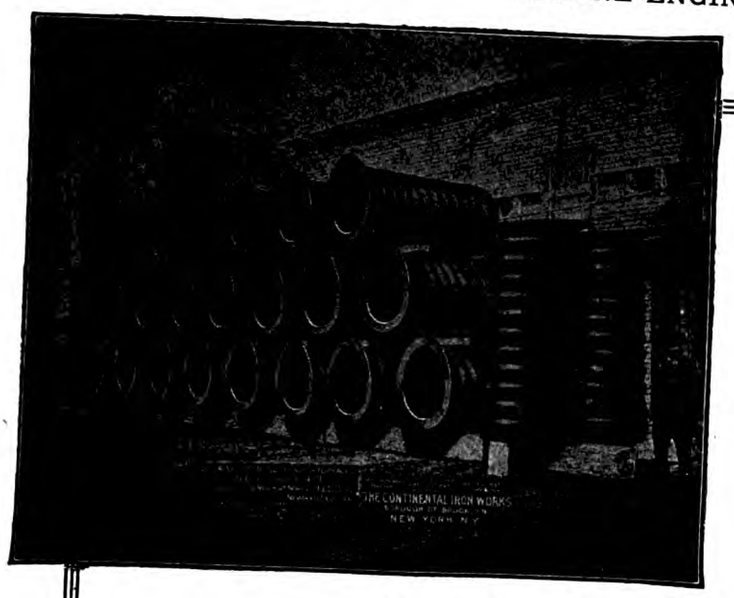
ARC WELDING
(See Welding, Electrical)

ASBESTOS PACKING
(See Packing, Asbestos)

ASH EJECTORS
Davidson Company, M. T., 154 Nassau Street, New York
Marine Decking & Supply Co., 1011 Chestnut Street, Philadelphia, Pa.
Row & Davis, Engineers, Inc., 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

ASH HOISTS
American Clay Machinery Company, Liberty Building, Philadelphia, Pa.
American Engineery Company, Philadelphia, Pa.
Great Lakes Engineering Works, Detroit, Mich.

Generated on 2024-09-12 08:17 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



MORISON SUSPENSION FURNACES

For Land and Marine Boilers

UNIFORM THICKNESS
EASILY CLEANED
UNEXCELLED STRENGTH

MADE TO UNITED STATES,
LLOYDS, BUREAU VERITAS
OR ANY OTHER REQUIREMENTS

MADE IN THE UNITED STATES BY

The Continental Iron Works

West and Calyer Streets, Borough of Brooklyn, N. Y.

Established 1859 Greenpoint Ferry from East 23rd Street, New York Incorporated 1887

Hyde Windlass Company, Bath, Maine
Ingersoll-Rand Company, 11 Broadway, New York
Lidgerwood Manufacturing Company, 96 Liberty Street
McNab Company, The, Bridgeport, Conn.
Mundy Hoisting Engine Company, J. S., Newark, N. J.

ASPHALT PAINT
American Bitumastic Enamels Co., 17 Battery Place, New York
Texas Company, The, 17 Battery Place, New York
Williams, Wm. E., 62 Front Street, New York

AUTOMATIC FIRE ALARMS
(See Fire Alarms)

AUTOMATIC INJECTORS
Lunkenheimer Company, The, Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

AUTOMATIC TOWING MACHINES
(See Towing Machines)

BABBITT METAL
Cramp & Son, Wm., Ship & Engine Bldg. Co., Richmond & Norris Streets, Philadelphia, Pa.
Morse Dry Dock & Repair Co., Brooklyn, N. Y. (Anal.)
Williams, Wm. E., 62 Front Street, New York

BACK PRESSURE VALVES
Griscom-Russell Company, 90 West Street, New York
Williams, Wm. E., 62 Front Street, New Yo

BALANCING
(See Dynamic Balancing)

BALL BEARINGS
Bantam Ball Bearing Company, Bantam, Conn.
Gwilliam Company, The, 253 West 58th Street, New York
Hardie-Tynes Manufacturing Company, Birmingham, Ala.

BALLAST PUMPS
Buffalo Steam Pump Company, Buffalo, N. Y.
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Dean Brothers Steam Pump Works, Indianapolis, Ind.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Kinney Manufacturing Company, Boston, Mass.
Morris Machine Works, Baldwinsville, N. Y.
Steam Motors Company, Inc., Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Worthington Pump & Machinery Corporation, 115 Broadway, New York

BALSA WOOD
American Balsa Company, 50 East 42nd Street, New York

BARGES
Baltimore Dry Docks & Shipbldg. Company, Baltimore, Md.
Dravo-Doyle Company, Pittsburgh, Pa.
Valk & Murdock Company, Charleston, S. C.

BARGE DERRICKS
Lidgerwood Manufacturing Company, 96 Liberty Street, New York

BAROMETERS
Hand, John E., & Sons Co., Haddonfield, N. J.
Taylor Instrument Companies, Rochester, N. Y.
Williams, Wm. E., 62 Front Street, New York

BARS—STEEL
General Steel Company, Public Service Building, Milwaukee, Wis.
Harvey Company, Arthur C., 374 Congress Street, Boston, Mass.
Williams, Wm. E., 62 Front Street, New York

BATH PUMPS
Mott Iron Works, J. L., Trenton, N. J.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

BATH TUBS
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Mott Iron Works, J. L., Trenton, N. J.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

BEAMS, CHANNELS, ANGLES
General Steel Company
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.

BEARINGS
(See Ball Bearings and Roller Bearings)

BELLS AND BUTTONS
Benjamin Electric Mfg. Co., Chicago, Ill.
Cory, Chas., & Son Inc., 290 Hudson Street, New York
Edwards & Company, Inc., 140th & Exterior Streets, New York
Klaxon Company, Metropolitan Tower, New York
Western Electric Company, 151 Fifth Avenue, New York

BELTING
(Also see Rubber Belting)
Edwards & Co., Inc., 140th & Exterior Streets, New York
Goodyear Tire & Rubber Co., Akron, Ohio
Graton & Knight Manufacturing Co., Worcester, Mass.
United States Rubber Company, 1790 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

BELT DRESSING
Texas Company, The, 17 Battery Place, New York
Williams, Wm. E., 62 Front Street, New York

BENCH TOOLS
Brubaker, W. L., & Bro., 50 Church Street, New York
Greenfield Tap & Die Corporation, Greenfield, Mass.
Pratt & Whitney Company, Inc., Hartford, Conn.
Starrett, L. S., Company, Athol, Mass.
Standard Tool Company, Cleveland, Ohio
Whitman & Barnes Mfg. Company, Akron, Ohio
Williams & Co., J. H., 63 Richards Street, Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

BENDING MACHINES
(Keel Plate or Cardboard; also see Pipe Bending Machines)
Buffalo Forge Company, Buffalo, N. Y.
Niles-Bement-Pond Company, 111 Broadway, New York
Watson-Stillman Company, 50 Church Street, New York

BENDING ROLLS
(See Rolls)

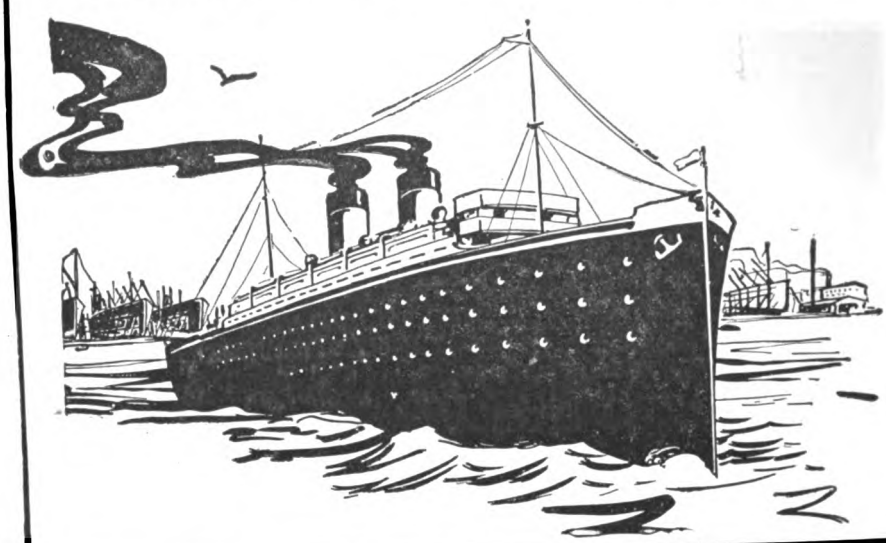
Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

USE

Rostand

Quality of Material and Workmanship, Coupled with Prompt Delivery, keep us in the Front Rank as Manufacturers of

AIR PORTS—FIXED LIGHTS



FOR ALL SIZES & KINDS OF SHIPS & YACHTS

THE ROSTAND Manufacturing Company

MILFORD, CONN.

BERTHS
Bernstein Manufacturing Company, 3d & Allegheny Avenues, Philadelphia, Pa.
Foster Bros. Manufacturing Co., Utica, N. Y.
Southern-Rome Company, 617a West Pratt Street, Baltimore, Md.

BEVELED FILLERS
Irving Iron Works Company, Long Island City, N. Y.

BEVELING & SPLITTING SHEARS
Cleveland Punch & Shear Works Co., Cleveland, Ohio
Niles-Bement-Pond Company, 111 Broadway, New York
Ryerson, Joseph T., & Son, 16th & Rockwell Streets, Chicago, Ill.

BILGE PUMPS
Alberger Pump & Condenser Company, 140 Cedar Street, New York
Blackmer Rotary Pump Company, Book Building, Detroit, Mich.
Buffalo Steam Pump Company, Buffalo, N. Y.
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Davidson Company, M. T., 154 Nassau Street, New York
Dean Bros., Steam Pump Works, Indianapolis, Ind.
DeLaval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
Epping-Carpenter Pump Company, Pittsburgh, Pa.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Morris Machine Works, Baldwinsville, N. Y.
Sands & Son Company, A. B., 22 Vesey Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Steam Motors Company, Inc., Springfield, Mass.
Tiebout, W. & J., 118 Chambers Street, New York
Washington Pump & Machinery Corporation, 115 Broadway, N. Y.
Williams, Wm. E., 62 Front Street, New York

BILGE SYPHONS
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

BINNACLES
Hand, John E., & Sons Company, Haddonfield, N. J.
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

BINOCULARS
Hand, J. E., Sons Company, Haddonfield, N. J.
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

BITS
Whitman & Barnes Mfg. Company, Akron, Ohio
Williams, Wm. E., 62 Front Street, New York

BITTS
American Engineering Company, Philadelphia, Pa.
Central Foundry Company, 90 West Street, New York
Great Lakes Engineering Works, Detroit, Mich.
Hyde Windlass Company, Bath, Maine
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Williams, Wm. E., 62 Front Street, New York

BITUMINOUS COATINGS
American Bitumastic Enamels Co., 17 Battery Place, New York

BLOCKS
(See Chain Hoists and Blocks; also Tackle Blocks)
McNab Company, The, Bridgeport, Conn.
Upson-Walton Company, 291 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

BLOWERS
(Also see Soot Blowers)
Buffalo Forge Company, Buffalo, N. Y.
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
Diamond Power Specialty Company, Detroit, Mich.
General Electric Company, Schenectady, N. Y.
Howden & Company, James, Wellsville, N. Y.
Kearfott Engineering Company, 95 Liberty Street, New York
Ohio Blower Company, Cleveland, Ohio
Reid & Company, John, 30 Church Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Steam Motors Company, Inc., Springfield, Mass.
Sturtevant Company, B. F., Hyde Park, Boston, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

BLOW-OFF VALVES
Crane Company, The, 836 South Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Pratt & Cady Company, Inc., Hartford, Conn.
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
William Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

BLUE PRINTING MACHINES
Pease Company, C. F., 230 Institute Place, Chicago, Ill.

BLUE PRINTING PAPER
New York Blue Print Paper Company, Reade Street, New York
Pease Company, C. F., 230 Institute Place, Chicago, Ill.

BOAT ACCESSORIES
American Balsa Company, 50 East 42d Street, New York
Ferdinand, L. W., & Co., 152 Kneeland Street, Boston, Mass.
Gwilliam Company, The, 253 West 14th Street, New York
Sands, A. B., & Son Company, 22 Vesey Street, New York
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Steward Davit & Equipment Corp., 17 Battery Place, New York
Williams, Wm. E., 62 Front Street, New York

BOAT BUILDERS
(See Launches and Yachts)

BOAT DAVITS
(See Davits)

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ALBANY GREASE

is used by marine engineers on the bearings of all kinds of equipment aboard ship, in shipbuilding plants, repair and dry-dock yards, regardless of temperature. This is made possible by the wide range of melting points to be had in Albany Grease. If the temperature at the bearing is high, No. X, XX or XXX Albany Grease should be used. For moderate bearing temperatures use No. 2 or No. 3 Albany Grease. For cold running bearings or for outdoor winter service, No. 0 or No. 1 Albany Grease will give satisfactory results. We will be glad to consult with you at any time on your lubricating problems. You are at liberty to draw on our experience of more than 50 years of manufacturing high grade lubricants. If you are not using Albany Grease, why not let us send you samples without charge and try it?

ADAM COOK'S SONS, Inc.

708-10 Washington St. New York

ESTABLISHED 1868

BOAT FITTINGS
Ferdinand L. W. & Co., 152 Kneeland Street. Boston, Mass.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Tiebout, W. & J., 118 Chambers Street, New York
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

BOAT NAILS
Malleable Iron Fittings Company, Branford, Conn.
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

BOATS
(See Life Boats; also Launches & Yachts)

BOILER BRACES
Lukens Steel Co. Coatesville, Pa.

BOILERS
Almy Watertube Boiler Company, Providence, R. I.
American Shipbuilding Company, Cleveland, Ohio
American Spiral Pipe Works, P. O. Box 485, Chicago, Ill.
Ames Shipbuilding & Dry Dock Company, Hoge Building, Seattle, Wash.
Babcock & Wilcox Company, 85 Liberty Street, New York
Badenhausen Company, 1425 Chestnut Street, Philadelphia, Pa.
Baltimore Dry Docks & Shipbldg. Co., Baltimore, Md.
Bethlehem Shipbuilding Corporation, Bethlehem, Pa.
Consolidated Shipbuilding Corporation, Morris Heights, N. Y.
Cramp, Wm., & Sons Ship & Engine Building Co., Richmond & Norris Streets, Philadelphia, Pa.
Fletcher, W. & A., Company, Hoboken, N. J.
Great Lakes Engineering Works, Detroit, Mich.
Heine Safety Boiler Company, 5322 Marcus Avenue, St. Louis, Mo.
Howden, James, & Company, Wellsville, N. Y.
Hyde Windlass Company, Bath, Maine
Kearfott Engineering Company, 95 Liberty Street, New York
Kingsford Foundry & Machine Company, Oswego, N. Y.
Manitowoc Shipbuilding Company, Manitowoc, Wis.
Morse Dry Dock & Repair Co., Brooklyn, N. Y.
New York Engineering Company, 2 Rector Street, New York
Pacific Marine Iron Works, Portland, Ore.
Traylor Eng. & Mfg. Co., Allentown, Pa.
Valk & Murdoch Company, Charleston, S. C.
Vulcan Iron Works, Inc., Foot of Hudson Street, Jersey City, N. J.
Ward, Charles, Engineering Works, Charleston, W. Va.

BOILER CIRCULATIONS
McNab Company, The, Bridgeport, Conn.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

BOILER COVERINGS
(See Non-Conducting Covering)

BOILER EXPANDERS
Watson-Stillman Company, 50 Church Street, New York
Williams, Wm. E., 62 Front Street, New York

BOILER FEEDERS
(See Feed-Water Regulators)

BOILER FEED PUMPS
(See Pumps)
Alberger Pump & Condenser Company, 140 Cedar Street, New York
Buffalo Steam Pump Company, Buffalo, N. Y.
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Davidson Company, M. T., 154 Nassau Street, New York
Dean Brothers Steam Pump Works, Indianapolis, Ind.
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
Fairbanks, Morse & Company, 900 So. Wabash Avenue, Chicago, Ill.
Kingsford Foundry & Machine Company, Oswego, N. Y.
Morris Machine Works, Baldwinsville, N. Y.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Steam Motors Company, Inc., Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Williams, Wm. E., 62 Front Street, New York
Worthington Pump & Machinery Corporation, 115 Broadway, New York

BOILER FLUE CLEANERS
Diamond Power Specialty Company, Detroit, Mich.
Independent Pneumatic Tool Company, 600 West Jackson Blvd., Chicago, Ill.
Williams, Wm. E., 62 Front Street, New York

BOILER FLUE CUTTERS AND EXPANDERS
Independent Pneumatic Tool Company, 600 West Jackson Blvd., Chicago, Ill.

BOILER GAUGE GLASSES
(See Gauge Glasses)

BOILER GRAPHITE
Dixon, Joseph Crucible Company, Jersey City, N. J.
Williams, Wm. E., 62 Front Street, New York

BOILER HEADS
Lukens Steel Co., Coatesville, Pa.

BOILER MAKERS' TEST PUMPS
(See Test Pumps)

BOILER NOZZLES, WELDED STEEL
American Spiral Pipe Works, P. O. Box 485, Chicago, Ill.
Continental Iron Works, The West & Calyer Streets, Brooklyn, N. Y.

BOILER PLATES
(See Steel Plates)

BOILER RIVETS
(See Rivets)

BOILER RIVETERS
(See Power Riveters)

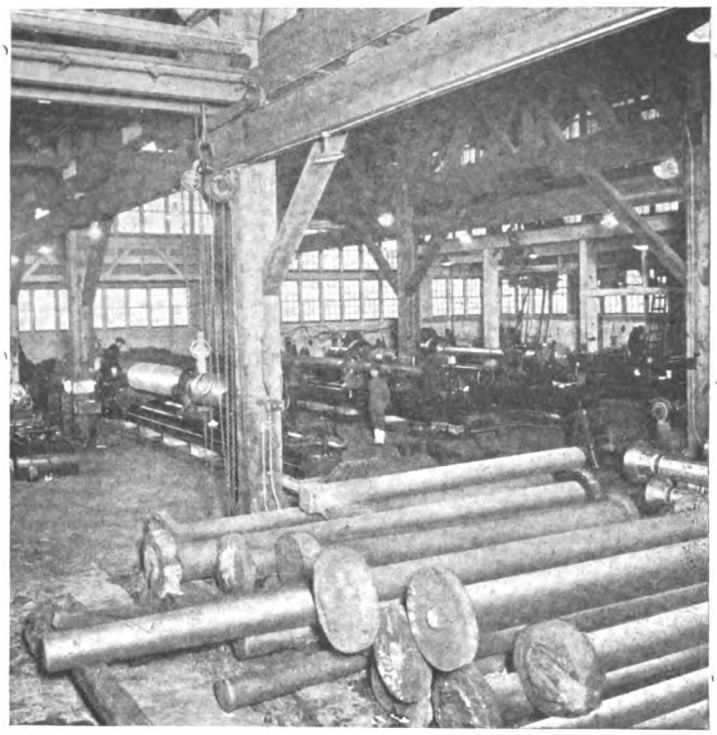
BOILER ROOM FITTINGS
American Steam Gauge & Valve Mfg. Company, Camden Street, Boston, Mass.
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Howden, James, & Company, Wellsville, N. Y.
Jerguson Gage and Valve Company, Winter Hill, Somerville, Mass.

Generated on 2024-09-12 08:15 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Pacific Construction & Engineering Co.

2917 Whatcom Avenue, Seattle, Wash.

ROBERT C. MONTEAGLE, Pres't and Gen'l Mgr



Crank Shafts
Stern Frames
Rudder Posts
Rudder Stocks
Rudder Arms
Connecting Rods
Piston Rods
Plate Bending Rolls
Dummy Turbines
Line Shafts
Thrust Shafts
Tail Shafts
Valve Stems
Eccentric Rods
Cross Heads
Links
Link Blocks
Columns
Couplings (Hollow)
Coupling Bolts

HEAVIEST FORGING AND MACHINING IN THE WEST

Kearfott Engineering Company, 95 Liberty Street, New York
Kennedy Valve Mfg. Co., Elmira, N. Y.
Kinney Manufacturing Company, Boston, Mass.
Lunkenheimer Company, The, Cincinnati, Ohio
Mason Regulator Company, Dorchester Centre, Boston, Mass.
National Tube Company, Frick Building, Pittsburgh, Pa.
Powell, Wm., The, Cincinnati, Ohio
Reid & Company, John, 30 Church Street, New York
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Row & Davis, Engineers, Inc., 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Union Water Meter Company, Worcester, Mass.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

BOILER STAYBOLTS
(See Staybolts)

BOILER, STEAM AND WATER DRUMS, WELDED
Continental Iron Works, The, West & Calyer Streets, Brooklyn, N. Y.

BOILER TUBE RETARDERS
National Tube Company, Frick Building, Pittsburgh, Pa.
Reid & Company, John, 30 Church Street, New York
Williams, Wm. E., 62 Front Street, New York

BOILER TUBES
Harvey Company, Arthur C., 374 Congress Street, Boston, Mass.
Kearfott Engineering Company, 95 Liberty Street, New York
National Tube Company, Frick Building, Pittsburgh, Pa.
Parkesburg Iron Company, Parkesburg, Pa.
Williams, Wm. E., 62 Front Street, New York

BOLTS AND NUTS
Russell, Burdsall & Ward Bolt & Nut Co., Rochester, N. Y.
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

BOOMS—TUBULAR STEEL
National Tube Company, Frick Building, Pittsburgh, Pa.

BORING BARS
(See Cylinder Boring Bars)

BORINGS MACHINES—METAL WORKING
Ingersoll-Rand Company, 11 Broadway, New York
Niles-Bement-Pond Company, 111 Broadway, New York

BORING MACHINES—WOOD
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Independent Pneumatic Tool Company, 600 West Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York

BORING AND TURNING MILLS
Niles-Bement-Pond Company, 111 Broadway, New York

BOTTOM PAINTS FOR SHIPS
International Compositions Company, 18 Broadway, New York
Toch Brothers, 320 Fifth Avenue, New York

BRASS AND COPPER
Sands, A. B., & Sons Co., 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

BRASS CASTINGS
(See Castings, Brass)

BRASS FITTINGS
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.
Ashton, Valve Company, 171 First Street, Cambridge, Mass.
Bridgeport Brass Co., Bridgeport, Conn.
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Kennedy Valve Mfg. Co., Elmira, N. Y.
Lunkenheimer Company, The, Cincinnati, Ohio
Mason Regulator Company, Dorchester Centre, Boston, Mass.
Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Tiebout, W. & J., 118 Chambers Street, New York
Williams Valve Mfg. Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

BRAZING MATERIALS
Smooth-On Manufacturing Company, 570 Communipaw Avenue, Jersey City, N. J.

BRIDGE CONTROL
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

BRIDGE WALLS
(See Furnace Bridge Walls)

BROKERS
(See Ship Brokers)

BRONZE
American Manganese Bronze Company, Holmesburg, Philadelphia, Pa.
Columbian Bronze Corporation, 50 Church Street, New York
Cramp & Son, William, Ship & Engine Bldg. Co., Richmond & Norris Streets, Philadelphia, Pa.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

BUILDERS
Monks & Johnson, 99 Chauncy Street, Boston, Mass.

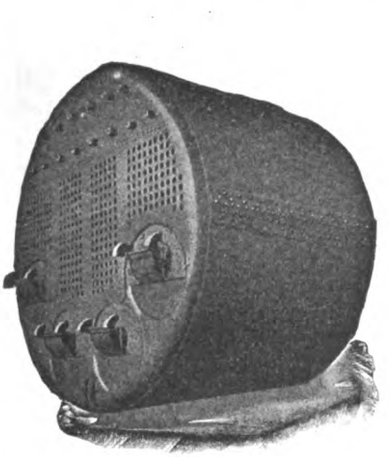
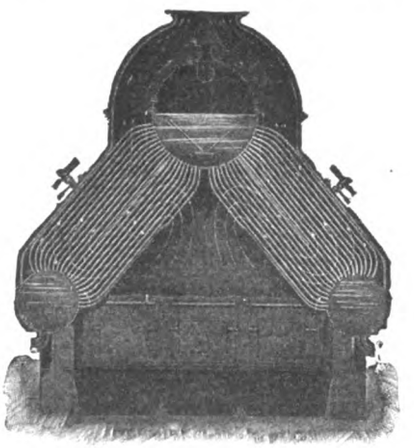
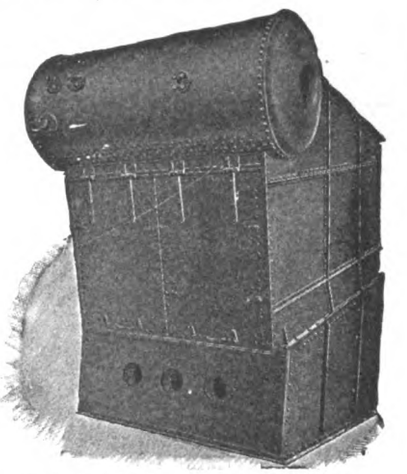
BUNKS
Bernstein Manufacturing Co., 3d & Allegheny Avenues, Philadelphia, Pa.
Foster Bros. Manufacturing Co., Utica, N. Y.
Southern-Rome Company, 617a West Pratt Street, Baltimore, Md.

BUOYS
Galbraith, C. C., & Son, 47 West Street, New York
Williams, Wm. E., 62 Front Street, New York

BUOYS, RING
Ferdinand & Co., L. W., 152 Kneeland Street, Boston, Mass.
Williams, Wm. E., 62 Front Street, New York

Generated on 2024-09-12 08:17 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

WE SPECIALIZE IN THE BUILDING OF MARINE BOILERS

SCOTCH MARINE BOILERS COLVEN EXPRESS WATER TUBE BOILERS
EMPIRE WATER TUBE BOILERS (STRAIGHT TUBES)

Our plant was specially designed and built for the construction of Marine Boilers. It is equipped with automatic tools, specifically designed for this work, which enables us to turn out better built boilers at a low cost and in the shortest possible time.

NEW YORK ENGINEERING COMPANY

2 Rector Street, New York City
Works at Yonkers, New York

BURNERS, FUEL OIL
(See Fuel Oil Burners)

BUSHINGS
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, The, Cincinnati, Ohio
National Tube Company, Frick Building, Pittsburgh, Pa.
Williams, Wm. E., 62 Front Street, New York

BY-PASS VALVES
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Lunkenheimer Company, The Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

CABLES OF ALL KINDS FOR LIGHT AND POWER
Standard Underground Cable Company, Pittsburgh, Pa.

CABLES
(See Chain; also Rope)

CABLEWAYS
(See Marine Cableways)

CALIPER GAUGES
Williams & Co., J. H., 63 Richards Street, Brooklyn, N. Y.

CALKING MACHINERY
Ingersoll-Rand Company, 11 Broadway, New York

CALKING TOOLS
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

CANOE GLUE
Ferdinand & Company, L. W., 152 Kneeland Street, Boston, Mass.

CANVAS
Upson-Walton Company, 280 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

CAPSTANS
(Steam, Electric, Hand)
American Clay Machinery Company, Liberty Building, Philadelphia, Pa.
American Engineering Company, Philadelphia, Pa.
American Shipbuilding Company, Cleveland, Ohio
Dake Engine Company, Grand Haven, Mich.
Flory, S., Manufacturing Company, Bangor, Pa.
Hyde Windlass Company, Bath, Maine
Mundy Hoisting Engine Company, J. S., Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Williams, Wm. E., 62 Front Street, New York

CARBON DIOXIDE, VALVES AND FITTINGS
Frick Company, Waynesboro, Pa.
York Manufacturing Company, York, Pa.

CARBON DIOXIDE MACHINES
Frick Company, Waynesboro, Pa.
Kroeschell Bros. Ice Machine Co., 472 West Erie Street, Chicago, Ill.
York Manufacturing Company, York, Pa.

CAR DUMPERS
McMyler Interstate Company, Cleveland, Ohio
Brown Hoisting Machinery Company, Cleveland, Ohio

CARGO HOISTS
(See Hoisting Engines)

CARGO LIGHTS
Benjamin Electric Manufacturing Company, Chicago, Ill.
General Electric Company, Schenectady, N. Y.
Western Electric Company, 151 Fifth Avenue, New York
Williams, Wm. E., 62 Front Street, New York

CARGO WINCHES
(See Winches)

CASTINGS—ALUMINUM
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Sands, A. B., & Son Company, 22 Vesey Street, New York
Griscom-Russell Company, 90 West Street, New York
Hyde Windlass Company, Bath, Maine
Hooven, Owens, Rentschler Company, Hamilton, Ohio
Stevens-Aylsworth Co., Inc., 254 Broadway, New York

CASTINGS—BRASS
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bridgeport Brass Co., Bridgeport, Conn.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Cramp & Sons, Wm., Ship & Engine Bldg. Co., Richmond & Norris Streets, Philadelphia, Pa.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Fletcher, W. & A., Company, Hoboken, N. J.
Griscom-Russell Company, 90 West Street, New York
Hyde Windlass Company, Bath, Maine
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Rostand Manufacturing Company, Milford, Conn.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Tiebout, W. & J., 118 Chambers Street, New York
Valk & Murdoch Company, Charleston, S. C.
William Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

CASTINGS—BRONZE
American Manganese Bronze Company, Holmesburgh, Philadelphia, Pa.
American Steel Foundries, McCormick Building, Chicago, Ill.
Benjamin Electric Manufacturing Company, Chicago, Ill.
Columbian Bronze Corporation, 50 Church Street, New York
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Cramp & Sons, Wm., Ship & Engine Bldg. Co., Richmond & Norris Streets, Philadelphia, Pa.
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Fletcher Co., W. & A., Hoboken, N. J.

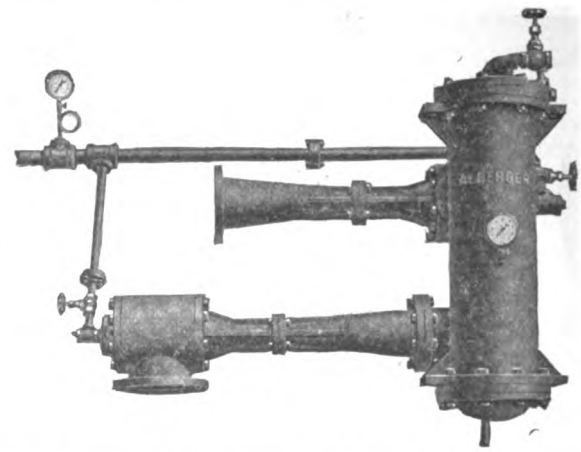
Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ALBERGER AIR OCCLUDERS

NO MOVING PARTS

NO RECIPROCATING VACUUM PUMP NECESSARY

MINIMUM STEAM CONSUMPTION



SMALL SPACE OCCUPIED

LARGE AIR HANDLING CAPACITY

CONVENIENT TO INSTALL AND OPERATE

ALBERGER AIR OCCLUDER WITH SURFACE INTERCOOLER

Send for Descriptive Bulletin

ALBERGER PUMP AND CONDENSER COMPANY

Boston
Philadelphia

140 CEDAR STREET, NEW YORK, N. Y.

Chicago
St. Louis

BUILDERS OF STEAMSHIP ENGINE ROOM AUXILIARIES

Lunkenheimer Company, The, Cincinnati, Ohio
Malleable Iron Fittings Company, Branford, Conn.
Penn Seaboard Steel Corporation, Franklin Bank Building, Philadelphia, Pa.
Powell Company, The William, Cincinnati, Ohio
Rostand Manufacturing Company, Milford, Conn.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Tiebout, W. & J., 118 Chambers Street, New York
Valk & Murdoch Company, Charleston, S. C.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

CASTINGS—GRAY IRON
Central Foundry Company, 90 West Street, New York
Hooven, Owens, Rentschler Co., Hamilton, Ohio
Norwalk Iron Works, South Norwalk, Conn.
Stevens-Aylsworth Co., Inc., 253 Broadway, N. Y.
Thacher Propeller & Foundry Corporation, Albany, N. Y
Williams, Wm. E., 62 Front Street, New York

CASTINGS—MONEL METAL
International Nickel Co., 43 Exchange Place, New York

CASTINGS—STEEL
American Clay Machinery Co., Liberty Building, Philadelphia, Pa.
American Steel Foundries, McCormick Building, Chicago, Ill.
Central Foundry Company, 90 West Street, New York
Cramp & Son, Wm., Ship & Engine Building Co., Richmond & Norris Streets, Philadelphia, Pa.
Crane Company, The, 836 South Michigan Avenue, Chicago, Ill.
Fletcher Company, W. & A., Hoboken, N. J.
General Steel Company, Public Service Building, Milwaukee, Wis.
Griscom-Russell Company, 90 West Street, New York
Hardie-Tynes Manufacturing Company, Birmingham, Ala.
Hyde Windlass Company, Bath, Maine
Hooven, Owens, Rentschler Company, Hamilton, Ohio
Lukenheimer Company, The, Cincinnati, Ohio
Penn Seaboard Steel Corporation, Franklin Bank Building, Philadelphia, Pa.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Stevens-Aylsworth Co., Inc., 253 Broadway, New York

CEILINGS
(Cabin)
Marine Decking & Supply Company, Philadelphia, Pa.

CEMENT—LINOLEUM
Ferdinand & Co., L. W., 152 Kneeland Street, Boston, Mass.

CENTRIFUGAL OIL PURIFIERS
De Laval Separator Company, 165 Broadway, New York

CENTRIFUGAL PUMPS
Alberger Pump & Condenser Company, 140 Cedar Street, New York
Buffalo Steam Pump Company, Buffalo, N. Y.
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Fairbanks-Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Morris Machine Works, Baldwinsville, N. Y.
Steam Motors Company, Springfield, Mass.
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.
Wheeler Manufacturing Company, C. H., Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York
Worthington Pump & Machinery Corporation, 115 Broadway, New York

CHAIN
Cory, Chas. & Son, Inc., 290 Hudson Street, New York
Harvey Company, Arthur C., 374 Congress Street, Boston, Mass.
Topping Brothers, 122 Chambers Street, New York
Upson-Walton Company, 280 Broadway New York

CHAIN HOISTS AND BLOCKS
Ford Chain Block & Mfg. Company, 2nd & Diamond Sts., Philadelphia, Pa.
Niles-Bement-Pond Company, 111 Broadway, New York
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York
Wyatt, Thos. Mfg. Company, Boston, Mass.
Yale & Towne Manufacturing Company, 9 East 40th Street, New York

CHAIN PIPE
Central Foundry Company, 90 West Street, New York

CHAINS FOR MARINE PURPOSES
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York
Wyatt, Thos. Manufacturing Company Boston, Mass.

CHAIN PIPE WRENCHES
American Engineering Company, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

CHAIN STOPPERS
American Engineering Company, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

CHAIN VALVE WHEELS
Babbitt Steam Specialty Company, New Bedford, Mass.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio

Generated on 2024-09-12 08:09 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

EFFICIENT TURBINES AND SATISFACTORY GEARS

Vessels fitted with De Laval Turbines are showing 15 to 25% better performance with regard to fuel consumption than are reciprocating-engined ships.

The high efficiency is due to the ability to use superheat and high vacuum to advantage. Turbine-driven auxiliaries and proper heat balancing also help in improving the overall economy.

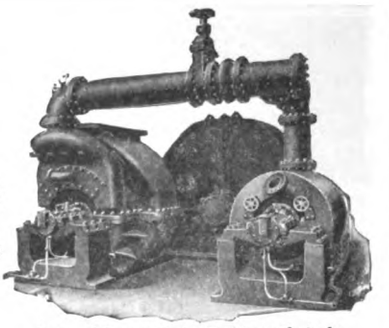
Ships fitted with De Laval Gears are almost unique in respect to reliable and satisfactory running. A good test of the proper operation of high speed gears is the amount of noise. De Laval Gears are practically noiseless.

The satisfactory operation of De Laval Gears is the result of 25 years' experience in designing and manufacturing gears and in designing and building the special machinery required to cut gears accurately.

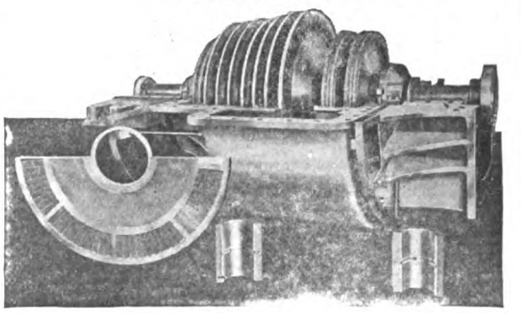
All De Laval apparatus is manufactured on a limit-gage interchangeable basis, with thorough inspection of parts. Each part is stamped with a designing number and with the initials of the inspector. Replacements can be ordered by cable and installed without requiring to be fitted.

Boats equipped with De Laval Turbine have more cargo-carrying capacity because of the saving in weight of engine-room equipment and fuel.

Ask for our Bulletin M, on Geared Marine Steam Turbines.



De Laval Geared Marine Turbine with single reduction gear; 2,500 h. p.; 110 r. p. m.



3,000 h. p. Marine Turbine with casing cover removed; view from reversing end.

DE LAVAL STEAM TURBINE CO.

400 NOTTINGHAM WAY TRENTON, N. J.

CHARCOAL IRON BOILER TUBES
Harvey Company, Arthur C., 374 Congress Street, Boston, Mass.
Parkesburg Iron Company, Parkesburg, Pa.
Williams, Wm. E., 62 Front Street, New York

CHECK VALVES—BRASS AND IRON
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Kennedy Valve Manufacturing Co., Elmira, N. Y.
Lunkenheimer Company, The, Cincinnati, Ohio
Mott Iron Works, J. L., Trenton, N. J.
Powell Company, The William, Cincinnati, Ohio
Pratt & Cady Company, Inc., Hartford, Conn.
Richardson-Phenix Company, The, 120 Reservoir Avenue, Milwaukee, Wis.
Sands & Son Company, A. B., 22 Vesey Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Watson-Stillman Company, 50 Church Street, New York
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

CHIPPING HAMMERS
(See Pneumatic Tools)

CHISELS
Keller Pneumatic Tool Company, Grand Haven, Mich.
Williams, Wm. E., 62 Front Street, New York

CHISEL BLANKS
Cleveland Steel Tool Company, 660 E. 82d Street, Cleveland, Ohio
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Ingersoll-Rand Company, 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.

CHRONOMETERS
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

CHRONOMETER VALVES
Union Water Meter Company, The, Worcester, Mass
Williams, Wm. E., 62 Front Street, New York

CHOCKS
American Engineering Company, Philadelphia, Pa.
Central Foundry Company, 90 West Street, New York
Great Lakes Engineering Works, Detroit, Mich.
Penn Seaboard Steel Corp., Franklin Bank Bldg., Philadelphia, Pa.
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Williams, Wm. E., 62 Front Street, New York

CHUCKS
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.
Morse Twist Drill & Machine Company, New Bedford, Mass.
Rich Tool Company, Railway Exchange, Chicago, Ill.
Rostand Manufacturing Company, Milford, Conn.
Williams, Wm. E., 62 Front Street, New York

CIRCULATING PUMPS
Alberger Pump & Condenser Company, 140 Cedar Street, New York
Buffalo Steam Pump Company, Buffalo, N. Y.
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Davidson Company, M. T., 154 Nassau Street, New York
Dean Bros. Steam Pump Works, Indianapolis, Ind.
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
Epping-Carpenter Pump Company, Pittsburgh, Pa.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Howden, James & Co., Ltd., Wellsville, N. C.
Kingsford Foundry & Machine Company, Oswego, N. Y.
Morris Machine Works, Baldwinsville, N. Y.
Steam Motors Company, Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.
Wheeler Manufacturing Company, C. H., Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York
Worthington Pump & Machinery Corporation, 115 Broadway, New York

CIRCULATING SYSTEMS FOR LUBRICATING OIL
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Mis.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

CIRCULATORS
(See Boiler Circulators)

CLAMPS—MACHINISTS AND TOOL MAKERS
Williams & Company, J. H., 63 Richards Street, Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

CLAMPS—BOILER
Topping Brothers, 122 Chambers Street, New York

CLASSIFICATION ASSOCIATION
American Bureau of Shipping, 66 Beaver Street, New York

CLEATS
Penn Seaboard Steel Corp., Franklin Bank Bldg., Philadelphia, Pa.

CLINCH RINGS
Galbraith, C. C., & Son, 47 West Street, New York
Malleable Iron Fittings Company, Branford, Conn.
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

CLOCKS
American Steam Gauge & Valve Mfg. Company, Camden Street, Boston, Mass.
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Hand, John E. & Sons Company, Haddonfield, N. J.
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

COAL-HANDLING MACHINERY
Brown Hoisting Machinery Company, Cleveland, Ohio

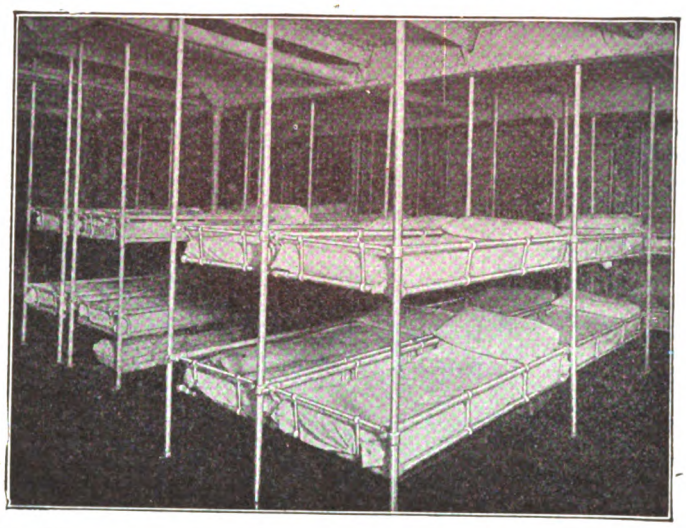
Generated on 2024-09-12 08:25 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Durable!

The No. 150 all-metal cabin berth, like all Southern-Rome products, is known for its superior design and excellent construction. It is built of drawn tubing and wherever there is strain the old breakable chilled castings have been replaced with malleable iron fittings. No. 150 is built for double bulkhead construction and has a single rise lee rail.

It is furnished in lengths to suit **your** cabin construction.

Equipped with Rome Link spring fabric, which is both rustless and sagless, durability is assured. At the same time, passengers appreciate the comfortableness of Southern-Rome berths.



Southern-Rome marine products are of the widest variety of design. Write for detailed information concerning berth and bunk equipment for staterooms, cabins and crews.

There's a Rome Link berth or bunk for every need.

Southern-Rome Company

Branch of the
Rome Metallic Bedstead Company

617 W. Pratt Street, Baltimore Md.

Lakeside Bridge & Steel Company, 139 Villard Ave., North Milwaukee, Wis.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McMyler Interstate Company, Cleveland, Ohio
Maine Electric Co., Portland, Me.
Mundy, J. S., Hoisting Engine Company, Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.
Shepard Electric Crane & Hoist Co., 382 Schuyler Ave., Montour Falls, N. Y.

COATINGS
(See Anti-Rust Coatings)

COCKS
(See Gauge Cocks)

COLD SAWS
Greenfield Tap & Die Corporation, Greenfield, Mass.

COMBINED AIR AND CIRCULATING PUMPS
Dean Bros. Steam Pump Works, Indianapolis, Ind.
Wheeler Manufacturing Company, C. H. Philadelphia, Pa.

COMPANION FLANGES
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, The, Cincinnati, Ohio
National Tube Company, Frick Building, Pittsburgh, Pa.
Powell Company, The William, Cincinnati, Ohio
Williams Valve Company, D. T., Cincinnati
Williams, Wm. E., 62 Front Street, New York

COMPASSES
Hand, John E. & Son, Co., Haddonfield, N. J.
Sperry Gyroscope Company, Brooklyn, N. Y.
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

COMPENSATORS
(See Automatic Compensators)

COMPOSITIONS
(See Ship's Compositions)

COMPRESSION RIVETERS
(See Power Riveters)

CONDENSERS
Alberger Pump & Condenser Company, 140 Cedar Street, New York
American Engineering Company, Philadelphia, Pa.
Bridgeport Brass Co., Bridgeport, Conn.
Buffalo Steam Pump Company, Buffalo, N. Y.
Consolidated Shipbuilding Corporation, Morris Heights, New York
Davidson Company, M. T., 154 Nassau St., New York
Dean Bros. Steam Pump Works, Indianapolis, Ind.
Fletcher Company, W. & A., Hoboken, N. J.
Great Lakes Engineering Works, Detroit, Mich.
Griscom-Russell Company, 90 West Street, New York
Kearfott Engineering Company, 95 Liberty Street, New York
Ross Heater & Manufacturing Company, Buffalo, N. Y.
Row & Davis Engineers, Inc., 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Traylor Engineering & Mfg. Co., Allentown, Pa.
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.
Wheeler Condenser & Engineering Company, Carteret, N. J.
Wheeler Manufacturing Co., C. H., Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York
Worthington Pump & Machinery Corporation, 115 Broadway, New York

CONDENSER TUBES
Bridgeport Brass Co., Bridgeport, Conn.
Kearfott Engineering Company, 95 Liberty Street, New York
Wheeler Condenser & Engineering Company, Carteret, N. J.
Williams, Wm. E., 62 Front Street, New York

CONNECTING RODS
Heppenstall Forge & Knife Company, Pittsburgh, Pa.
Pacific Construction & Engineering Company, 2917 Whatcom Ave., Seattle, Wash.
Williams & Company, J. H., 63 Richards Street, Brooklyn, N. Y.

CONSULTING ENGINEERS
(See Engineers, Consulting)

CONVEYING MACHINERY
Brown Hoisting Machinery Company, Cleveland, Ohio
Dravo Contracting Company, Pittsburgh, Pa.
Lakeside Bridge & Steel Company, 139 Villard Ave., North Milwaukee, Wis.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McMyler Interstate Company, Cleveland, Ohio
Maine Electric Co., Portland, Me.
Manning, Maxwell & Moore, Inc., 119 West 40th Street, New York
Mundy, J. S., Hoisting Engine Company, Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.

CONVEYORS (COAL)
(See Conveying Machinery)

CO^2 ICE MACHINES
(See Carbon Dioxide Machines)

COOLERS—OIL COPPERS
(See Oil Coolers)

COPPER
(See Brass & Copper)

COPPER PAINT FOR WOODEN VESSELS
International Compositions Company, 19 Broadway, New York

COPPERSMITHS
Badger, E. B. & Sons Co., 63 Pitts Street, Boston, Mass.

COPPER TUBES, RODS, WIRES
Williams, Wm. E., 62 Front Street, New York
Standard Underground Cable Company, Pittsburgh, Pa.

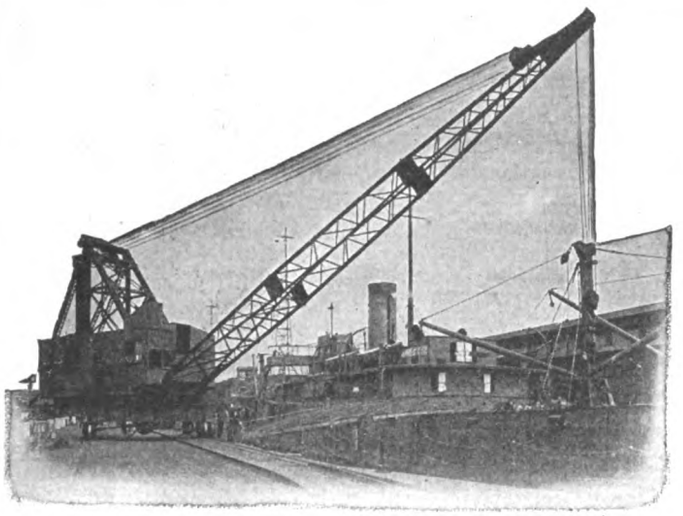
CORDAGE
(Also see Rope and Wire Rope; also twine)
American Manufacturing Company, Noble & West Sts., Brooklyn, N. Y.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

LOCOMOTIVE CRANES

CLAM SHELL BUCKETS - SHIPBUILDING CRANES
CAR DUMPERS PILE DRIVERS

THE McMYLER INTERSTATE CO.
CLEVELAND OHIO



Here is a new type of Dry Dock Crane which has proven to be an entire success. This machine will handle a load of 20 tons at 80 ft. radius.

The crane is fitted with swivelling trucks and a compensating gear arrangement which permits it to travel around the end of the dry dock.

When in the market for material handling equipment, take it up with "CRANE HEADQUARTERS."

The McMyler Interstate Company, Cleveland, Ohio

BRANCH OFFICES:
New York City, 1756 Hudson Terminal Bldg.; Chicago, Ill., 812 Edison Building; Seattle, Wash., Hoge Building; Denver, Colorado, 18th & Wazee Streets; San Francisco, Calif., 407 Merchants Exchange Bldg. S.C. 9

Columbian Rope Company, Auburn, N. Y.
Durable Wire Rope Company, 93 Pearl Street, Boston, Mass.
Griscom-Russell Company, 90 West Street, New York
Moon Company, George C., Garwood, N. J.
Plymouth Cordage Company, North Plymouth, Mass.
Samson Cordage Works, Boston, Mass.
Upson-Walton Company, 280 Broadway, New York
Waterbury Company, 63 Park Row, New York
Whitlock Cordage Company, 46 South Street, New York
Williams, Wm. E., 62 Front Street, New York

CORK CEMENT
Ferdinand L. W. & Company, 152 Kneeland Street, Boston, Mass.

CORRUGATED FURNACES
American Spiral Pipe Works, P. O. Box 485, Chicago, Ill.
Continental Iron Works The, West & Calyer Sts., Brooklyn, New York
Howden, James, & Company, Wellsville, N. Y.
McNab Company, The, Bridgeport, Conn.

COUNTERS
(See Revolution Counters)

COUNTERSINKING MACHINES
Lakeside Bridge & Steel Company, 139 Villard Avenue, Milwaukee, Wis.

COUNTERSINKS
Standard Tool Company, Cleveland, Ohio
Whitman & Barnes Mfg. Company, Akron, Ohio

COUPLINGS
(See Hose Couplings)

COVERINGS—NON-CONDUCTING
(See Non-conducting Coverings)

COWLS
Ohio Blower Company, Cleveland, Ohio
Stevens-Aylsworth Co., Inc., 253 Broadway, New York

CRANES
(Also See Floating Cranes & Shipyards Whirlers)
American Balsa Company, 50 East 42d Street, New York
American Engineering Company, Philadelphia, Pa.
Brown Hoisting Machinery Company, Cleveland, Ohio
Chambersburg Engineering Company, Chambersburg, Pa.
Dravo-Doyle Company, Pittsburgh, Pa.
Lakeside Bridge & Steel Company, 139 Villard Ave., North Milwaukee, Wis.
McMyler Interstate Company, Bedford, Ohio
Maine Electric Co., Portland, Me.
Manitowoc Shipbuilding Company, Manitowoc, Wis.
Manning, Maxwell & Moore, Inc., 119 West 40th Street, New York
Milwaukee Electric Crane & Mfg. Co., Milwaukee, Wis.
Niles-Bement-Pond Company, 111 Broadway, New York
Pawling & Harnischfeger Co., Milwaukee, Wis.
Shepard Electric Crane & Hoist Co., 382 Schuyler Ave., Montour Falls, N. Y.
Sprague Electric Works, 527 West 34th Street, New York
Topping Brothers, 122 Chambers Street, New York

CRANK SHAFTS
Great Lakes Engineering Works, Detroit, Mich.
Pacific Construction & Engineering Company, 2917 Whatcom Ave., Seattle, Wash.
Williams & Co., J. H., 63 Richards St., Brooklyn, N. Y.

CUTTERS
Greenfield Tap & Die Corporation, Greenfield, Mass.
Morse Twist Drill & Machine Company, New Bedford, Mass.
Pratt & Whitney Company, 111 Broadway, New York
Standard Tool Company, Cleveland, Ohio
Williams, Wm. E., 62 Front Street, New York

CUTTING COMPOUNDS
Texas Company, The, 17 Battery Place, New York
Williams, Wm. E., 62 Front Street, New York

CUTTING & WELDING
(See Welding)

CYLINDER BORING BARS
Niles-Bement-Pond Company, 111 Broadway, New York
Williams & Company, J. H., 63 Richards Street, Brooklyn, N. Y.

CYLINDER RELIEF VALVES
(See Valves)

CYLINDERS FOR COMPRESSED AIR, GAS, ETC.
Continental Iron Works, The, West & Calyer Sts., Brooklyn, N. Y.
National Tube Company, Frick Building, Pittsburgh, Pa.

DAVITS
American Balsa Company, 50 East 42d Street, New York
Steward Davit & Equipment Corporation, 17 Battery Place, New York
McNab Company, The, Bridgeport, Conn.

DECK FITTINGS
Penn Seaboard Steel Corp., Franklin Bank Building, Philadelphia, Pa.
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Williams, Wm. E., 62 Front Street, New York

DECK HOISTS
(See Hoisting Engines)

DECK PLATES
Harvey Company, Arthur C., 374 Congress Street, Boston, Mass.
Sands & Son, A. B., 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

DECK PUMPS
Dean Brothers Steam Pump Works, Indianapolis, Ind.
Sands & Son Company, A. B., 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

DECKING
Marine Decking & Supply Company, Philadelphia, Pa.

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

NORWALK AIR & GAS COMPRESSORS

Any Capacity **Any Pressure**

Used in Every State in the Union.

Distinctive Features Which Add to Norwalk Compressor Efficiency

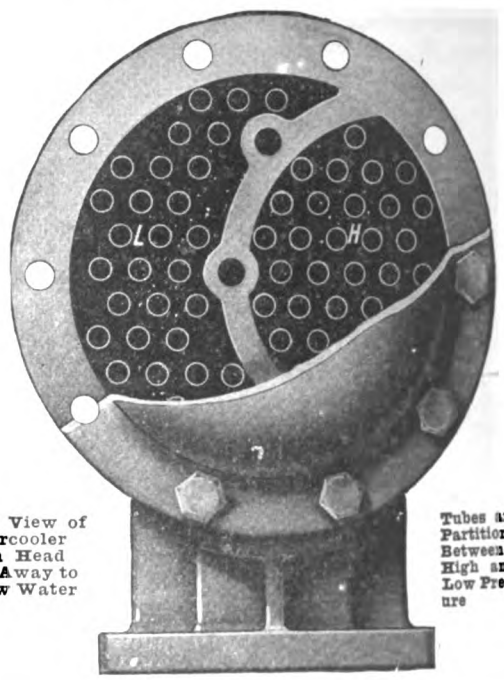
3. Head of Intercooler

In the Norwalk the intercoolers are placed *above* the gas cylinders. This permits of taking the gas out at the lowest point. Thus the intercooler is automatically drained and kept clear of any lubricant discharged from any cylinder or water coming from a chance leak.

Another advantage: the gas of lowest temperature seeks the bottom of the intercooler and is therefore first to be carried forward for the next stage of compression.

Bulletins on Air, Oxygen, Hydrogen, Acetylene and Carbonic Acid Gas are ready. *Your copies on request.*

The Norwalk Iron Works Company
SOUTH NORWALK, CONN.
Pioneer Builders of Compressors



End View of **Inter**cooler **with** Head **Cut A**way to **Show** Water

Tubes and Partition Between High and Low Pressure

DEHUMIDIFYING
Sturtevant Co., B. F., Hyde Park, Boston, Mass.

DEPTH RECORDERS
Hand, J. E., & Sons Company, Haddonfield, N. J.

DERRICKS
Maine Electric Co., Portland, Me.
Lakeside Bridge & Steel Company, 139 Villard Avenue, Milwaukee, Wis.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McMyler Interstate Company, Bedford, Ohio

DERRICK CARS
McMyler Interstate Company, Bedford, Ohio
Maine Electric Co., Portland, Me.

DERRICK IRONS
Lidgerwood Manufacturing Company, 96 Liberty Street, New York

DIAPHRAGM PUMPS
Hyde Windlass Company, Bath, Maine

DIE BLOCKS
General Steel Co., Milwaukee, Wis.
Heppenstall Forge & Knife Co., Pittsburgh, Pa.

DIES
Brubaker & Bros. W. L., 50 Church Street, New York
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Cleveland Steel Tool Company, 660 E. 82d Street, Cleveland, Ohio
Greenfield Tap & Die Corporation, Greenfield, Mass.
Morse Twist Drill & Machine Company, New Bedford, Mass.
Williams, Wm. E., 62 Front Street, New York

DIESEL ENGINES
(Also see Engines, Oil)
American Clay Machinery Company, Liberty Building, Philadelphia, Pa.
Johannsen, H. S., 50 Church Street, New York
Kearfott Engineering Company, 95 Liberty Street, New York
McIntosh & Seymour Corporation, Auburn, N. Y.
Midwest Engine Company, Indianapolis, Ind.
New London Ship & Engine Company, Groton, Conn.
Winton Engine Works, Cleveland, Ohio

DIRECT CONNECTED SETS
(See Electrical Plants)

DIRECTION AND REVOLUTION INDICATORS
McNab Company, The, Bridgeport, Conn.

DISENGAGING GEARS
American Balsa Company, 50 East 42d Street, New York
Steward Davit & Equipment Corporation, 17 Battery Place, New York

DISTILLERS
(See Evaporators)

DIVING APPARATUS
Morse, Andrew J., & Son, Inc., 221 High Street, Boston, Mass.

DOCK FITTINGS
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Williams, Wm. E., 62 Front Street, New York

DRAFT GAUGES
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

DRAFTING INSTRUMENTS
New York Blue Print Paper Company, 102 Reade Street, New York
Pease, C. F. Co., 230 Institute Place, Chicago, Ill.
Starrett, L. S., Company, Athol, Mass.

DRAIN VALVES
(See Valves)

DRAWING MATERIALS
(Board, Cloth, Paper, Ink, Etc.)
National Tracing Cloth Co., Sayville, R. I.
New York Blue Print Paper Company, 102 Reade Street, New Yrok
Pease, C. F., Company, 230 Institute Place, Chicago, Ill.
Spaulding-Moss Co., 34 Federal St., Boston, Mass.
Starrett, L. S., Company, Athol, Mass.

DRAWING PENCILS
American Lead Pencil Company, 206 Fifth Avenue, New York
Dixon Crucible Company, Jersey City, N. J.

DRAFTING ROOM FURNITURE
New York Blue Print Paper Company, 102 Reade Street, New York

DREDGES
Great Lakes Engineering Works, Detroit, Mich.
Manitowoc Shipbuilding Company, Manitowoc, Wis.
Morris Machine Works, Baldwinsville, N. Y.

DREDGING MACHINERY
Alberger Pump & Condenser Company, 140 Cedar Street, New York
American Engineering Company, Philadelphia, Pa.
Fletcher Company, W. & A., Hoboken, N. J.
Flory Manufacturing Company, S., Bangor, Pa.
Great Lakes Engineering Works, Detroit, Mich.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McMyler Interstate Company, Cleveland, Ohio
Morris Machine Works, Baldwinsville, N. Y.
Mundy Hoisting Engine Co., J. S., Newark, N. J.

DREDGING PUMPS
Kingsford Foundry & Machine Co., Oswego, N. Y.
Morris Machine Works, Baldwinsville, N. Y.
Terry Steam Turbine Company, Hartford, Conn.
Worthington Pump & Machinery Corporation, 115 Broadway, New York

DRIFT PINS
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Cleveland Steel Tool Company, 660 E. 82d Street, Cleveland, Ohio
Topping Brother, 112 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

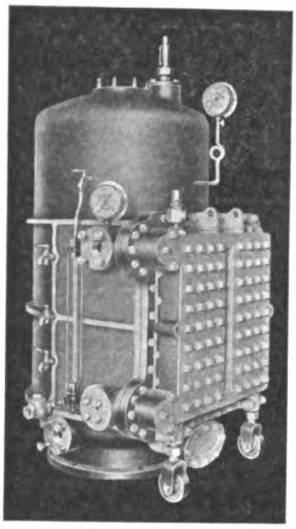
Generated on 2024-09-12 08:07 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

S&K NAVY TYPE EVAPORATORS

OUR EVAPORATORS
combine all the qualities necessary for high efficiency

SIMPLE OF CONSTRUCTION
STRONG AND DURABLE
SMALL SPACE OCCUPIED
LIGHT IN WEIGHT
EASY TO CLEAN AND HANDLE

Send for Descriptive Catalog



OTHER MARINE EQUIPMENT INCLUDES

DISTILLERS
OIL COOLERS AND HEATERS
SHIP THROTTLE AND MANEUVERING VALVES
REDUCING VALVES
INJECTORS
BILGE SYPHONS
COMPLETE OIL BURNING SYSTEMS

SCHUTTE & KOERTING
1158 THOMPSON STREET, PHILADELPHIA, PA.

DRILLING MACHINES
Lakeside Bridge & Steel Company, 139 Villard Avenue, North Milwaukee, Wis.
Lynd-Farquhar Company, 419 Atlantic Avenue, Boston, Mass.
Niles-Bement-Pond Company, 111 Broadway, New York

DRILLS
Morse Twist Drill & Machine Company, New Bedford, Mass.
Pratt & Whitney Company, Hartford, Conn.
Rich Tool Company, Railway Exchange, Chicago, Ill.
Standard Tool Company, Cleveland, Ohio
Whitman & Barnes Manufacturing Company, Akron, Ohio
Williams, Wm. E., 62 Front Street, New York

DRILLS, ELECTRIC
(See Electric Drills)

DRILLS, PNEUMATIC
(See Air Drills)

DRILLS, PORTABLE
(See Portable Drills)

DRILLS, WALL RADIAL
(See Radial Drills)

DROP FORGINGS
(Eye Bolts, Wrenches, Etc.)
Camden Forge Company, Camden, N. J.
Whitman & Barnes Mfg. Company, Akron, Ohio
Williams & Company, J. H., 63 Richards Street, Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

DROP HAMMERS
Chambersburg Engineering Company, Chambersburg, Pa.
Niles-Bement-Pond Company, 111 Broadway, New York

DRY DOCK PUMPS
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Great Lakes Engineering Works, Detroit, Mich.
Morris Machine Works, Baldwinsville, N. Y.
Worthington Pump & Machinery Corporation, 115 Broadway, New York

DRY DOCKS
(Manufacturer and Marine Railways)
Crandall Engineering Company, 102 Border Street, East Boston, Mass.
Great Lakes Engineering Works, Detroit, Mich.

DRY DOCKS AND MARINE RAILWAYS
Baltimore Dry Docks & Shipbuilding Co., Baltimore, Md.
Cramp, Wm. & Sons Ship & Engine Building Co., Richmond & Norris Sts., Philadelphia, Pa.
Great Lakes Engineering Works, Detroit, Mich.
Morse Dry Dock & Repair Co., Brooklyn, N. Y.
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.
Todd Shipyards Corporation, 15 Whitehall Street, New York
Union Dry Dock & Repair Co., Weehawken, N. J.
Valk & Murdoch Company, Charleston, S. C.

DYNAMOS
(See Electric Plants)

ECCENTRIC RODS
Pacific Construction & Engineering Company, 2917 Whatcom Ave., Seattle, Wash.

ECONOMIZERS, FUEL
(See Fuel Economizer)

EJECTORS
Lunkenheimer Company, Cincinnati, Ohio
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

ELECTRIC CRANES
(See Electric Hoists)

ELECTRIC DRILLS AND GRINDERS
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Cincinnati Electrical Tool Company, Cincinnati, Ohio
General Electric Company, Schenectady, N. Y.
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
United States Electrical Tool Co., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

ELECTRIC DRIVEN PUMPS
Blackmer Rotary Pump Company, Book Building, Detroit, Mich.
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Dean Bros., Steam Pump Works, Indianapolis, Ind.
Kinney Manufacturing Company, Boston, Mass.

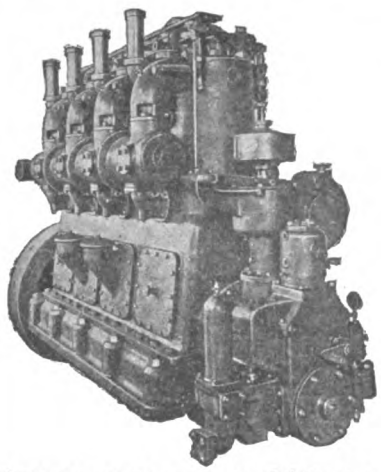
ELECTRIC FREIGHT TRUCKS
(See Freight-Handling)

ELECTRIC HEATERS
General Electric Company, Schenectady, N. Y.

ELECTRIC HOISTS
American Engineering Company, Philadelphia, Pa.
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
General Electric Company, Schenectady, N. Y.
Brown Hoisting Machinery Company, Cleveland, Ohio
Dake Engine Company, Grand Haven, Mich.
Hyde Windlass Company, Bath, Maine
Lakeside Bridge & Steel Company, 139 Villard Ave., No. Milwaukee, Wis.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
Maine Electric Company, Portland, Me.
Mundy Hoisting Engine Company, J. S., Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.
Niles-Bement-Pond Company, 111 Broadway, New York
Shepard Electric Crane & Hoist Company, 382 Schuyler Ave., Montour Falls, N. Y.
Western Electric Company, 151 Fifth Avenue, New York

ELECTRIC LIGHTING
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bryant Electric Company, Bridgeport, Conn.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Pittsburgh Heavy Duty Oil Engine
Marine Type

POWER UNITS
For
SHIPS

OUR OIL ENGINES MARINE TYPE IN SIZES 50 to 150 H.P.

Furnished Marine Type with Reverse Gear and Thrust Block for Direct Drive or Sub Base for Direct Connected Motor Drive for Auxiliaries or Generators.

EXCELLENCE OF DESIGN, CONSTRUCTION AND EFFICIENCY INVITE CONSIDERATION

Bulletin E-20.

PITTSBURGH FILTER & ENGINEERING COMPANY

Pittsburgh, Pa.
Works: Oil City, Pa.

Sales Office and Engine Dept.
280 Broadway, New York, N. Y.

Sales Office
Kansas City, Mo.

Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Crouse-Hinds Company, Syracuse, N. Y.
Engberg's Electric & Mechanical Works, St. Joseph, Mich.
General Electric Company, Schenectady, N. Y.
Lovell F. H., & Co., Ltd., Arlington, N. J.
Novelty Electric Co., 50 North 4th St., Philadelphia, Pa.
Western Electric Company, 151 Fifth Avenue, New York

ELECTRIC METERS
(See Meters, Electric)

ELECTRIC PLANTS
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bryant Electric Company, Bridgeport, Conn.
Consolidated Shipbuilding Corporation, Morris Heights, New York
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Engberg's Electric & Mechanical Works, St. Joseph, Mich.
Fairbanks, Morse & Company, Chicago, Ill.
General Electric Company, Schenectady, N. Y.
Mietz Corporation, August, 428 E. 19th Street, New York
Steam Motors Company, Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Western Electric Company, 151 Fifth Avenue, New York
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

ELECTRIC PUMPS
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.

ELECTRIC SIGNALS
Cory, Chas., & Sons, Inc., 290 Hudson Street, New York
Klaxon Company, Metropolitan Tower, New York

ELECTRIC TACHOMETERS
Cory, Chas., & Son, Inc., 290 Hudson Street, New York

ELECTRIC WELDING
(See Welding, Electric)

ELECTRICAL APPLIANCES, INSTALLATIONS, FITTINGS AND SUPPLIES
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bryant Electric Company, Bridgeport, Conn.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Crouse-Hinds Company, Syracuse, N. Y.
Engberg's Electric & Mechanical Works, St. Joseph, Mich.
General Electric Company, Schenectady, N. Y.
Livingston & Co., J., Grand Central Terminal, New York
Lovell, F. H., & Co., Arlington, N. J.
Novelty Electric Company, 50 North 4th Street, Philadelphia, Pa.
Western Electric Company, 151 Fifth Avenue, New York
Williams, Wm. E., 62 Front Street, New York

ELECTRICAL INSTRUMENTS
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
General Electric Company, Schenectady, N. Y.
Western Electric Company, 151 Fifth Avenue, New York
Weston Electrical Instrument Company, 53 Weston Avenue Newark, N. J.
Williams, Wm. E., 62 Front Street, New York

ELECTRICAL WIRING DEVICES
(Switches, Sockets, Etc.)
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bryant Electric Company, Bridgeport, Conn.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Lovell F. H., & Co., Ltd., Arlington, N. J.
Western Electric Company, 151 Fifth Avenue, New York
Williams, Wm. E., 62 Front Street, New York

ENGINE LOGS
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

ENGINE OIL
(See Lubricants)

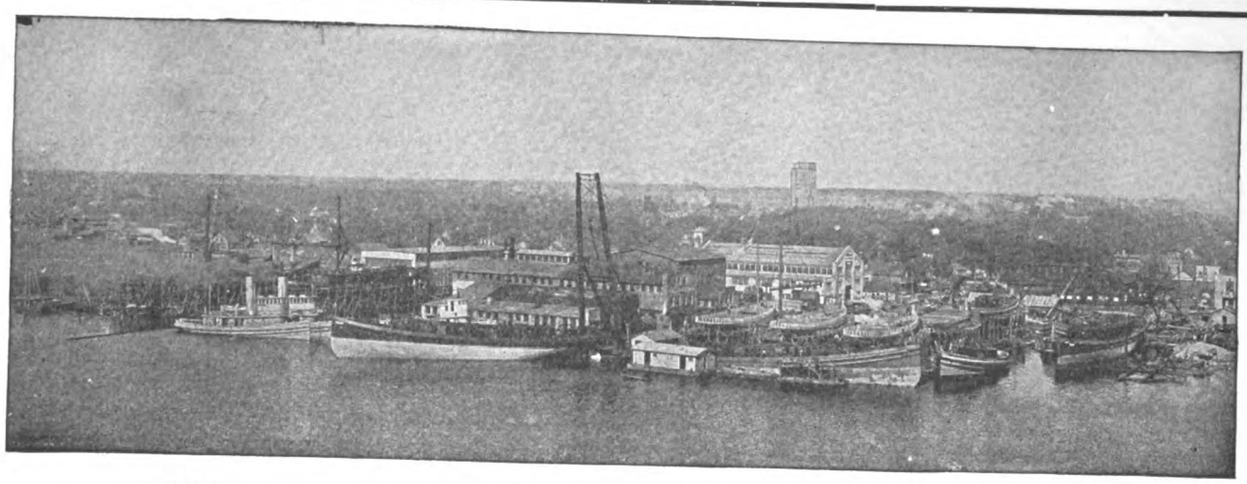
ENGINE PACKING
(See Packing)

ENGINE ROOM COUNTERS
(See Revolution Counters)

ENGINE ROOMS TELEGRAPHS
Cory, Chas., & Son, Inc., 290 Hudson Street, New York

ENGINEERS, CONSULTING
American Engineering Company, Philadelphia, Pa.
American Shipbuilding Company, Cleveland, Ohio
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bogert, J. L., 165 Broadway, New York
Brenzinger, A. H., 41 Union Square, New York
Cox & Stevens, 15 William Street, New York
Crandall Engineering Company, 102 Border Street, East Boston, Mass.
Donnelly, W. T., 17 Battery Place, New York
Ferris, Theodore, 30 Church Street, New York
Great Lakes Engineering Works, Detroit Mich.
Haight, Robert S., 17 State Street, New York
Harris, Leonard B., Woolworth Building, New York
Hough, Edward S., 16 California Street, San Francisco, Cal.
Howden & Company, Ltd., James, Wellsville, N. Y.
Jacobs, J. L., & Company, Monadnock Building, Chicago, Ill.
Johnson, Arthur F., 535 Cass Street, Milwaukee, Wis.
Leslie, Stevens Co., 120 Broadway, New York
Livingston & Company, J., Grand Central Terminal, New York
Lysholm, Henry, Philadelphia Stock Exchange Bldg., Philadelphia, Pa
McClelland & Co., N. E., Ltd., 2 Stone St New York
Marine Surveying & Adjusting Co., 1 Broadway, New York
Nilson, Leonard J., Baltimore, Md.
Reid & Company, John, 30 Church Street New York
Ross Heater & Manufacturing Company Buffalo, N. Y.
Row & Davis, Engineers, Inc., 90 West Street, New York

Generated on 2024-09-12 09:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



We are prepared to build Steel and Wood Vessels for Prompt Delivery

Steel and Wood Tugs or Trawlers our Specialty

Inquiries Invited

NORTHWEST ENGINEERING WORKS

GREEN BAY WISCONSIN

A. C. RIMMER, 149 Broadway, New York, *Representative*

Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Union Dry Dock & Repair Company, Weehawken, N. J.
Watts, J. Murray, 136 South 4th Street, Philadelphia, Pa.
Whittelsey & Whittelsey, Whitehall Building, New York

ENGINEERS, ELECTRICAL

Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Livingston & Company, J., Grand Central Terminal, New York

ENGINES FOR AUXILIARIES

Alberger Pump & Condenser Company, 140 Cedar Street, New York
American Clay Machinery Company, Liberty Building, Philadelphia, Pa.
American Shipbuilding Company, Cleveland, Ohio
Bolinders Company, 30 Church Street, New York
Consolidated Shipbuilding Corp., Morris Heights, N. Y.
Engberg's Electric & Mechanical Works, St. Joseph, Mich.
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Howden & Company, James, Wellsville, N. Y.
Hyde Windlass Company, Bath, Maine
Johannsen, H. S., 50 Church Street, New York
Kearfott Engineering Company, 95 Liberty Street, New York
McIntosh & Seymour Corp., Auburn, N. Y.
Maine Electric Co., Portland, Maine
Mietz Corporation, August, 428 E. 19th Street, New York
Morris Machine Works, Baldwinsville, N. Y.
New London Ship & Engine Company, Groton, Conn.
Pittsburgh Filter & Engineering Co., 280 Broadway, New York
Reid & Co., John, 30 Church Street, New York
Skandia Oil Engines, 50 Church Street, New York
Steam Motors Company, Springfield, Mass.
Sturtevant Company, B. F., Hyde Park, Boston, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Western Electric Company, 151 Fifth Avenue, New York
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

ENGINES, GASOLINE
(See Gasoline Engines)

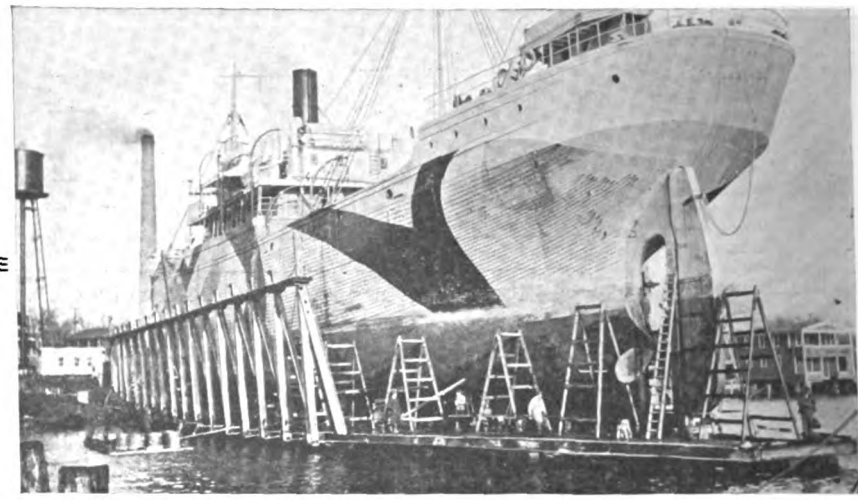
ENGINES, HOISTING
(See Hoisting Engines)

ENGINES, KEROSENE
(See Kerosene Engines)

ENGINES, OIL
(Also see Diesel Engines)
American Clay Machinery Corporation, Liberty Building, Philadelphia, Pa.
Bolinders Company, 30 Church Street, New York
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Consolidated Shipbuilding Corporation, Morris Heights, N. Y.
Fairbanks, Morse & Company, Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Johannsen, H. S., 50 Church Street, New York
McIntosh & Seymour Corporation, Auburn, N. Y.
Midwest Engine Company, Indianapolis, Ind.
Mietz Corporation, August, 428 E. 19th Street, New York
New London Ship & Engine Company, Groton, Conn.
Pittsburgh Filter & Engineering Company, Pittsburgh, Pa.
Skandia Oil Engines, 50 Church Street, New York
Standard Motor Construction Company, 120 Pine Street, Jersey City, N. J.
Sumner Company, H. W., L. C. Smith Building, Seattle, Wash.
Winton Engine Company, Cleveland, Ohio
Wolverine Motor Works, Bridgeport, Conn.

ENGINES, PROPELLING
American Clay Machinery Co., Liberty Building, Philadelphia, Pa.
American Shipbuilding Company, Cleveland, Ohio
Ames Shipbuilding & Dry Dock Company, Seattle, Wash.
Atlantic Corporation, Portsmouth, N. H.
Badenhausen Company, 1425 Chestnut Street, Philadelphia, Pa.
Bay State Iron Works, 366 Fifth Avenue, New York
Bethlehem Shipbuilding Corporation, Bethlehem, Pa.
Bolinders Company, 30 Church, Street, New York
Consolidated Shipbuilding Corp., Morris Heights, N. Y.
Cramp & Son, William, Ship & Engine Bldg. Company, Richmond & Norris Street, Philadelphia, Pa.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Fletcher Company, W. & A., Hoboken, N. J.
Great Lakes Engineering Works, Detroit, Mich.
Hallidie Company, Spokane, Wash.
Hardie-Tynes Manufacturing Company, Birmingham, Ala.
Hooven, Owens, Rentschler Company, Hamilton, Ohio
Howden & Company, James, Wellsville, N. Y.
Ingersoll-Rand Company, 11 Broadway, New York
Johannsen, H. S., 50 Church Street, New York
Kearfott Engineering Company, 95 Liberty Street, New York
McIntosh & Seymour Corporation, Auburn, N. Y.
Manitowoc Shipbuilding Company, Manitowoc, Wis.
Midwest Engine Company, Indianapolis, Ind.
Mietz Corporation, August, 428 E. 19th Street, New York
Morris Machine Works, Baldwinsville, N. Y.
Morse Dry Dock & Repair Co., Brooklyn, N. Y.
New London Ship & Engine Company, Groton, Conn.
Parsons Marine Steam Turbine Company, 2 Rector Street, New York
Pittsburgh Filter & Engineering Company, Pittsburgh, Pa.
Reid & Company, John, 30 Church Street, New York

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



2500 Ton Railway Dry Dock, Fall River, Mass.

THE CRANDALL ENGINEERING CO.

DRY DOCK ENGINEERS

Floating Dry Docks **Railway Dry Docks**

102 Border Street **East Boston, Mass.**

Skandia Oil Engine,, 50 Church Street, New York
Standard Motor Construction Company, 120 Pine Street, Jersey City, N. J.
Steam Motors Company, Springfield, Mass.
Sumner Company, H. W., L. C. Smith Bldg., Seattle, Wash.
Sturtevant Company, B. F., Hyde Park, Boston, Mass.
Traylor Engineering & Mfg. Co., Allentown, Pa.
Trout Company, H. G., Buffalo, N. Y.
Vulcan Iron Works, Inc., Foot of Hudson St., Jersey City, N. J.
Ward, Charles, Engineering Works, Charleston, W. Va.
Winton Engine Company, Cleveland, Ohio
Wolverine Motor Works, Bridgeport, Conn.

ENGINES, PUMPING

Alberger Pump & Condenser Company, 140 Cedar Street, New York
Davidson Company, M. T., 154 Nassau Street, New York
Epping-Carpenter Pump Company, Pittsburgh, Pa.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Morris Machine Works, Baldwinsville, N. Y.
Row & Davis, Engineers, Inc., 90 West Street, New York
Steam Motors Company, Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Worthington Pump & Machinery Corporation, 115 Broadway, New York

ENGINE-ROOM CLOCKS

(See Clocks)

ENGINE ROOM GRATINGS

Irving Iron Works Company, Long Island City, N. Y.

ENGINE ROOM SUPPLIES

(See Steam Specialties)

ENGINE ROOM TELEGRAPHS

Chadburn (Ship) Telegraph Company, Troy, N. Y.
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

ERASERS

Dixon Crucible Company, Joseph, Jersey City, N. J.
New York Blue Print Paper Company, 102 Reade Street, New York

EVAPORATORS

Alberger Pump & Condenser Company, 140 Cedar Street, New York
American Engineering Company, Philadelphia, Pa.
Davidson Company, M. T., 154 Nassau Street, New York
Griscom-Russell Company, 90 West Street, New York
Kearfott Engineering Company, 95 Liberty Street, New York
Ross Heater & Manufacturing Company, Buffalo, N. Y.
Row & Davis, Engineers, Inc., 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

EXHAUST FANS

(See Blowers)

EXPANDERS

(See Boiler Flue Expanders and Pipe Expanding and Flanging Machines)

EXPANSION JOINTS

Alberger Pump & Condenser Company, 140 Cedar Street, New York
Crane, Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Lunkenheimer Company, Cincinnati, Ohio
National Tube Company, Frick Building, Pittsburgh, Pa.
Powell Company, The William, Cincinnati, Ohio
Ross Heater & Manufacturing Company, Buffalo, N. Y.

EYE BOLTS

William & Co., J. H., 63 Richards Street, Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

FABRIKOID

Du Pont Fabrikoid Company, Wilmington, Del.

FACTORY BUILDERS

Monks & Johnson, 99 Chauncy Street, Boston, Mass.

FAIRLEADERS

Thacher Propeller & Foundry Corporation, Albany, N. Y.

FANS

(See Blowers)

FEED WATER HEATERS

Griscom-Russell Company, 90 West Street, New York
Kearfott Engineering Company, 95 Liberty Street, New York
Ross Heater & Manufacturing Company Buffalo, N. Y.
Row & Davis, Engineers, Inc., 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

FEED WATER REGULATORS

Alberger Pump & Condenser Company, 140 Cedar Street, New York
Jerguson Gage & Valve Company, Winter Hill, Somerville, Mass.
Kearfott Engineering Company, 95 Liberty Street, New York

FENCES

(See Wire Fences)

FERRULES—CONDENSER TUBE

(See Condenser Tube Ferrules)

FILES

Nicholson File Company, Providence, R. I.
Whitman & Barnes Manufacturing Company, Akron, Ohio
Williams, Wm. E., 62 Front Street, New York

FILING CABINETS

Pease Company, C. F., 230 Institute Place Chicago, Ill.

FILLING STATION EQUIPMENT

Wayne Oil Tank & Pump Company, 549 Canal Street, Fort Wayne, Ind.

FILTERS—MARINE OIL

Griscom-Russell Company, 90 West Street, New York

Generated on 2024-09-12 08:59 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Admiral Jellicoe Was Worried About His Condenser Tubes

He seemed to be more anxious over his condensers than over his 11-inch guns. The condenser tubes in many of his ships were in bad condition.

The regular commercial brand of tubing is *Not* good enough for condensers. Special painstaking care must be exercised in manufacturing this product to do it *Right*.

A few years ago we couldn't get the high quality condenser tubing we wanted, so we built a large mill and are now making our own. Wheeler Crescent Brand tubes are drawn and heat treated by *Experts in Condenser Work*.

It will pay you to specify CRESCENT BRAND or order direct from our mill.

NO ORDER TOO LARGE OR TOO SMALL

During one month of this year we made and shipped nearly 1,000,000 pounds of condenser tubing—*A Record*.

Shall we put you on our tube department mailing list?

WHEELER CONDENSER & ENG. CO. CARTERET, N. J.

Manufacturers of: Condensers; Centrifugal Pumps, Vacuum Pumps, including the patented Wheeler Steam Jet Air Pump; Evaporators; and all other condensing equipment for marine service. 38

Kearfott Engineering Company, 95 Liberty Street, New York
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Row & Davis, Engineers, Inc., 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

FIRE ALARM SYSTEMS
Cory, Charles, & Son, Inc., 290 Hudson Street, New York
Edwards & Company, Inc., 140th & Exterior Streets, New York
Fire Detecting Wire Company, 2 West 45th Street, New York
Klaxon Company, Metropolitan Tower, New York

FIRE DEPARTMENT SUPPLIES
Morse, Andrew J., & Son, Inc., 221 High Street, Boston, Mass.

FIRE EXTINGUISHERS
(Also see Fire Protection)
Morse, Andrew J., & Son, Inc., 221 High Street, Boston, Mass.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

FIRE HOSE
(See Hose)

FIREPROOF LUMBER
(See Lumber, Fireproof)

FIRE PUMPS
Blackmer Rotary Pump Company, Book Building, New York
Buffalo Steam Pump Works, Buffalo, N. Y.
Dean Bros. Steam Pump Works, Indianapolis, Ind.
Epping-Carpenter Pump Company, Pittsburgh, Pa.
Morris Machine Works, Baldwinsville, N. Y.
Worthington Pump & Machinery Corporation, 115 Broadway, New York

FLAGS & PENNANTS
Granger, George B., Company, 66 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

FLANGED BOILER HEADS
Lukens Steel Co., Coatesville, Pa.

FLANGES
American Spiral Pipe Works, P. O. Box 485, Chicago, Ill.
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Dart, E. M., Mfg. Company, Providence, R. I.
Lunkenheimer Company, The, Cincinnati, Ohio
National Tube Company, Frick Building, Pittsburgh, Pa.
Penn Seaboard Steel Corp., Franklin Bank Building, Philadelphia, Pa.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

FLANGING MACHINES
Chambersburg Engineering Company, Chambersburg, Pa.
Niles-Bement-Pond Company, 111 Broadway, New York
Watson-Stillman Company, 50 Church Street, New York

FLEXIBLE STAYBOLTS
American Flexible Bolt Company, Union Bank Building, Pittsburgh, Pa.

FLOATING CRANES
(Also see Cranes)
Great Lakes Engineering Works, Detroit, Mich.
McMyler-Interstate Company, Bedford, Ohio
Maine Electric Co., Portland, Maine
Manitowoc Shipbuilding Company, Manitowoc, Wis.

FLOAT VALVES
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, The, Cincinnati, Ohio
Mason Regulator Company, Dorchester Centre, Boston, Mass.

FLOATING DRY DOCKS
(See Dry Docks)

FLOOR GRATINGS
Irving Iron Works Company, Long Island City, N. Y.

FLOOR PLATES
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.

FLOW INDICATORS—WATER-OIL
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.

FLUE CLEANERS
(See Boiler Flue Cleaners)

FLUE CUTTERS
(See Boiler Flue Cutters)

FLUE HOLE PUNCHES AND DIES
Cleveland Punch & Shear Works Company, Cleveland, Ohio

FOG HORNS
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Hand, John E., & Sons Co., Haddonfield, N. J.
Klaxon Company, Metropolitan Tower, New York
Williams, Wm. E., 62 Front Street, New York

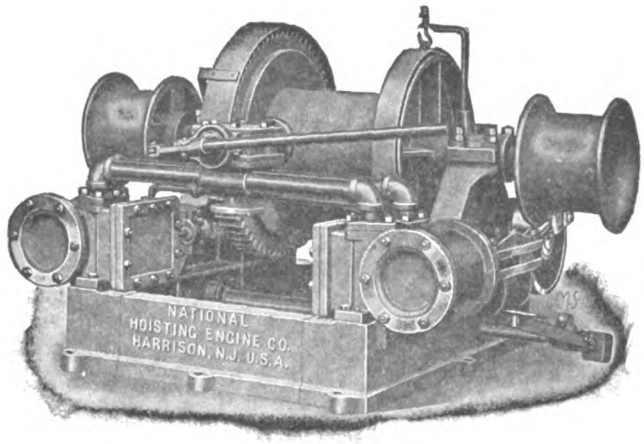
FOLDING ANCHORS
Malleable Iron Fittings Co., Branford, Conn.
Redington Standard Fittings Co., Bethlehem, Pa.

FORCED DRAFT
(See also Blowers)
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
General Electric Company, Schenectady, N. Y.
Howden, James, & Company, Wellsville, N. Y.
Reid & Company, John, 30 Church Street, New York
Steam Motors Company, Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.

FORGES
Baush Machine Tool Company, Springfield, Mass.
Buffalo Forge Company, Buffalo, N. Y.

FORGINGS, BRONZE
Camden Forge Company, Camden, N. J.
Hyde Windlass Company, Bath, Maine

Generated on 2024-09-12 09:03 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Reverse Throttle Valve Winch
as supplied on ships for U. S. Emergency Fleet Corporation

NATIONAL SHIP'S WINCHES

Steam--Electric--Gasolene

Strongly Constructed of the best materials, by experienced workmen, makes them reliable. They have stood the test for sixteen years.

Prompt Deliveries.

Send for our Ship Winch Catalog.

NATIONAL HOISTING ENGINE COMPANY
HARRISON, N. J.

Stevens-Aylsworth Co., Inc., 253 Broadway, New York

FORGINGS, IRON AND STEEL
(Also see Drop Forgings)
Camden Forge Company, Camden, N. J.
General Steel Company, Public Service Building, Milwaukee, Wis.
Heppenstall Forge & Knife Company, Pittsburgh, Pa.
Morse Dry Dock & Repair Co., Brooklyn, N. Y.
Pacific Construction & Engineering Company, 2917 Whatcom Avenue, Seattle, Wash.
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Valk & Murdoch Company, Charleston, S. C.

FORGINGS—MONEL METAL
International Nickel Co., 43 Exchange Place, New York

FREIGHT HANDLING EQUIPMENT
Brown Hoisting Machinery Company, Cleveland, Ohio
Dravo Contracting Company, Pittsburgh, Pa.
General Electric Co., Schenectady, N. Y.
Lakeside Bridge & Steel Company, 139 Villard Avenue, North Milwaukee, Wis.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McMyler Interstate Company, Cleveland, Ohio
Maine Electric Co., Portland, Maine
Manning, Maxwell & Moore, Inc., 119 West 40th Street, New York
Mundy, J. S., Hoisting Engine Company, Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.
Shepard Electric Crane & Hoist Company, 382 Schuyler Avenue, Montour Falls, N. Y.
Sprague Electric Works, 527 West 34th Street, New York
Western Electric Company, 151 Fifth Avenue, New York

FREIGHT TRUCKS
Mutual Truck Co., Sullivan, Ind.

FRIGIDOMETERS
McNab Company, The, Bridgeport, Conn.

FROST PROOF COVERINGS
Ferdinand, L. W., & Co., 152 Kneeland Street, Boston, Mass.

FUEL ECONOMIZERS
Diamond Power Specialty Company, Detroit, Mich.
Griscom-Russell Company, 90 West Street, New York
Magnesia Association of America, Bulletin Building, Philadelphia, Pa.
Sturtevant Company, B. F., Hyde Park, Boston, Mass.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

FUEL OIL
Standard Oil Company of New Jersey, 26 Broadway, New York
Texas Company, The, 17 Battery Place, New York

FUEL OIL ATOMIZERS
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

FUEL OIL BURNERS
Baush Machine Tool Co., 165 Broadway, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.
White Fuel Oil Engineering Corporation, 601 Washington Street, New York
Williams, Wm. E., 62 Front Street, New York

FUEL OIL HEATERS
Griscom-Russell Company, 90 West Street, New York
Ross Heater & Manufacturing Company, Buffalo, N. Y.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.
Williams, Wm. E., 62 Front Street, New York

FURNACE BRIDGE WALLS
Wager Furnace Bridge Wall Co., Inc., 149 Broadway, New York

FURNACE FRONTS
Continental Iron Works, The, West & Calyer Streets, Brooklyn, N. Y.
Fletcher Company, W. & A., Hoboken, N. J.
Great Lakes Engineering Works, Detroit, Mich.
Howden & Company, James, Wellsville, N. Y.
Reid & Company, John, 30 Church Street, New York

FURNACES
(Also see Oil Furnaces)
American Spiral Pipe Works, P. O. Box 485, Chicago, Ill.
Continental Iron Works, The, West & Calyer Streets, Brooklyn, N. Y.
McNab Company, The, Bridgeport, Conn.

FUSIBLE PLUGS
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Lunkenheimer Company, The, Cincinnati, Ohio
Williams Valve Co., D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

GALLEY PUMPS
Mott Iron Works, J. L., Trenton, N. J.
Sands & Son, A. B., 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

GALLEYS
(See Ranges)

GALVANIZED MATERIAL
Sands, A. B., & Son Company, 22 Vesey Street, New York
Tiebout, W. & J., 118 Chambers Street, New York
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

GANTRY CRANES
Niles-Bement-Pond Company, 111 Broadway, New York

GAS COMPRESSORS
Norwalk Iron Works, South Norwalk, Conn.

GASKETS
(Also see Packing)
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.

Generated on 2024-09-12 09:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

THE ADMIRAL ANCHOR CO.

1417 Sansom Street — Franklin Bank Building — PHILADELPHIA, PA.

Works: CHESTER, PA.

—

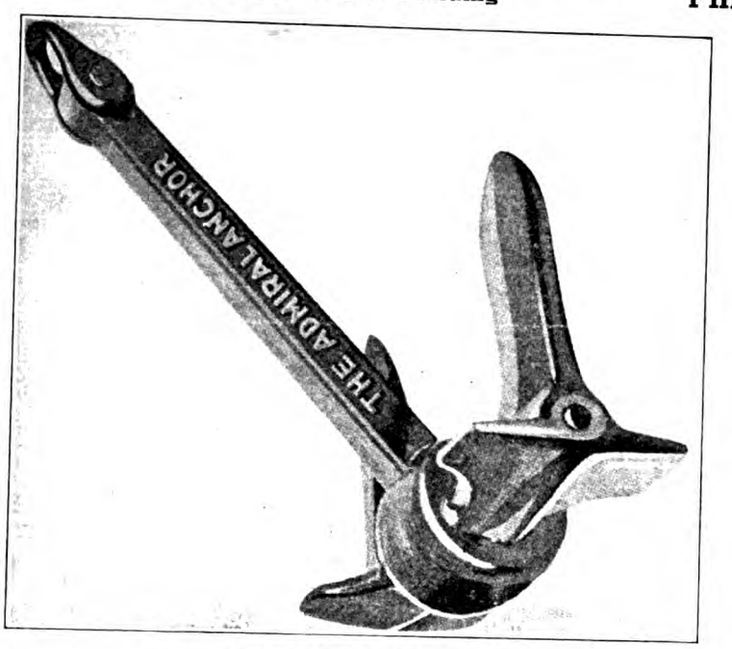
Approved by Lloyd's Register Bureau Veritas American Bureau of Shipping etc.

—

Admiral Anchors stow easily in the hawse pipe

—

Cannot Foul



New York Office 111 Broadway

—

Manufacturers:

Admiral Stockless Anchors

Old Style Stock Anchors

TrotmanAnchors

Mushroom Anchors

Mooring Anchors

—

Standard Sizes Kept in Stock

THE ADMIRAL ANCHOR
THE ANCHOR THAT NEVER LOST A SHIP

SHIP ANCHORS of Every Description

Goodrich Rubber Company, B. F., Akron, Ohio
Griscom-Russell Company, 90 West Street, New York
Smooth-On Manufacturing Company, 570 Communipaw Avenue, Jersey City, N. J.
United States Rubber Company, 1790 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

GASOLINE
Texas Company, The, 17 Battery Place, New York

GASOLINE ENGINES
Consolidated Shipbuilding Corporation, Morris Heights, N. Y.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Standard Motor Constructions Company, 120 Pine Street, Jersey City, N. J.
Winton Engine Company, Cleveland, Ohio
Wolverine Motor Works, Bridgeport, Conn.

GASOLINE PUMPS
Blackmer Rotary Pump Company, Book Building, Detroit Mich.
Sands & Son Company, A. B., 22 Vesey Street, New York
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

GASOLINE TANKS
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

GAS ENGINE SPECIALTIES
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Kennedy Valve Manufacturing Company, Elmira, N. Y.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Pratt & Cady Company, Inc., Hartford, Conn.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams Valve Company, D. T., Cincinnati, Ohio

GATE VALVES—BRASS & IRON
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Kennedy Valve Manufacturing Company, Elmira, N. Y.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Pratt & Cady, Inc., Hartford, Conn.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

GATE VALVES FOR TANK STEAMERS
Pratt & Cady Company, Inc., Hartford, Conn.
Williams, Wm. E., 62 Front Street, New York

GAUGE COCKS
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.
Jerguson Gage & Valve Company, Winter Hill, Somerville, Mass.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Pratt & Cady Company, Inc., Hartford, Conn.
Sands & Son Company, A. B., 22 Vesey Street, New York
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

GAUGE GLASSES
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Jerguson Gage & Valve Co., Winter Hill, Somerville, Mass.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

GAUGES—DRILL
Morse Twist Drill & Machine Company, New Bedford, Mass.

GAUGES—MANUFACTURERS'
(Also see Steam Gauges)
Greenfield Tap & Die Corporation, Greenfield, Mass.
Manning, Maxwell & Moore, Inc., 119 West 40th Street, New York
Pratt & Whitney Company, 111 Broadway, New York
Starrett Company, L. S., Athol, Mass.

GAUGE TESTERS
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.

GEARS
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
Falk Company, The, Milwaukee, Wis.
Penn Seaboard Steel Corporation, Franklin Bank Building, Philadelphia, Pa.
Poole Engineering & Machine Company, 50 Church Street, New York
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

GENERAL WELDING AND CUTTING EQUIPMENT
(See Welding & Cutting Apparatus and Supplies)

GENERATING SETS
Engberg's Electric & Mechanical Works, St. Joseph, Mich.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
General Electric Company, Schenectady, N. Y.
Mietz Corporation, 428 E. 19th Street, New York
Steam Motors Company, Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Western Electric Company, 151 Fifth Avenue, New York
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.
Williams, Wm. E., 62 Front Street, New York

GENERATORS
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bryant Electric Company, Bridgeport, Conn.
Crouse-Hinds Company, Syracuse, N. Y.
Fairbanks, Morse & Company, Chicago, Ill.
General Electric Company, Schenectady, N. Y.
Western Electric Company, 151 Fifth Avenue, New York
Williams, Wm. E., 62 Front Street, New York

Generated on 2024-09-12 08:14 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SHIP RIVETS

S. SEVERANCE MANUFACTURING CO.

GLASSPORT, PA. (Suburb of Pittsburgh)

GLOBE VALVES—BRASS AND IRON
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Kennedy Valve Mfg. Co., Elmira, N. Y.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Pratt & Cady Co., Inc., Hartford, Conn.
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

GLUE—MARINE
Ferdinand & Company, L. W., 152 Kneeland Street, Boston, Mass.
Williams, Wm. E., 62 Front Street, New York

GOVERNOR VALVES
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, The, Cincinnati, Ohio
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Union Water Meter Company, Worcester, Mass.
Williams, Wm. E., 62 Front Street, New York

GRAPHITE
Dixon Crucible Company, Jos., Jersey City, N. J.

GRATINGS—FOR ENGINE ROOM FLOORS, ETC.
Irving Iron Works Company, Long Island City, N. Y.

GREASE
(See Lubricants)

GREASE CUPS
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Sun Company, 1328 So. Penn Square, Philadelphia, Pa.
Williams Valve Company, D. T., Cincinnati, Ohio

GREASE EXTRACTORS
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.
Griscom-Russell Company, 90 West Street, Boston, Mass
Row & Davis, Engineers, Inc., 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

GRINDERS, ELECTRIC AND PNEUMATIC
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Greenfield Tap & Die Corporation, Greenfield, Mass.
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Keller Pneumatic Tool Company, Grand Haven, Mich.
United States Electrical Tool Company, Cincinnati, Ohio
Western Electric Company, 151 Fifth Avenue, New York

GRINDING MACHINES
(Plain and Universal)
Morse Twist Drill & Michine Company, New Bedford, Mass.

GUILLOTINE SHEARS
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Niles-Bement-Pond Company, 111 Broadway, New York

GYPSEYS
American Engineering Company, Philadelphia, Pa.
Hyde Windlass Company, Bath, Maine
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
Maine Electric Co., Portland, Maine
Mundy Hoisting Engine Co., J. S., Newark, N. J.

GYRO-COMPASSES
Sperry Gyroscope Company, Brooklyn, N. Y.

GYRO-STABILIZER
Sperry Gyroscope Company, Brooklyn, N. Y.

HAMMERS
Bradley & Son, C. C., Syracuse, N. Y.

HAMMERS, PNEUMATIC
(See Pneumatic Tools)

HAMMERS, STEAM
Chambersburg Engineering Works, Chambersburg, Pa.
Niles-Bement-Pond Company, 111 Broadway, New York

HAMMOCKS
(See Couch Hammocks)

HANDLES (CRANK, BALANCE, MACHINE)
Williams, & Co., J. H., 63 Richards Street, Brooklyn, N. Y.

HARDWARE
(See Marine Hardware)

HARDWOOD
(See Lumber)

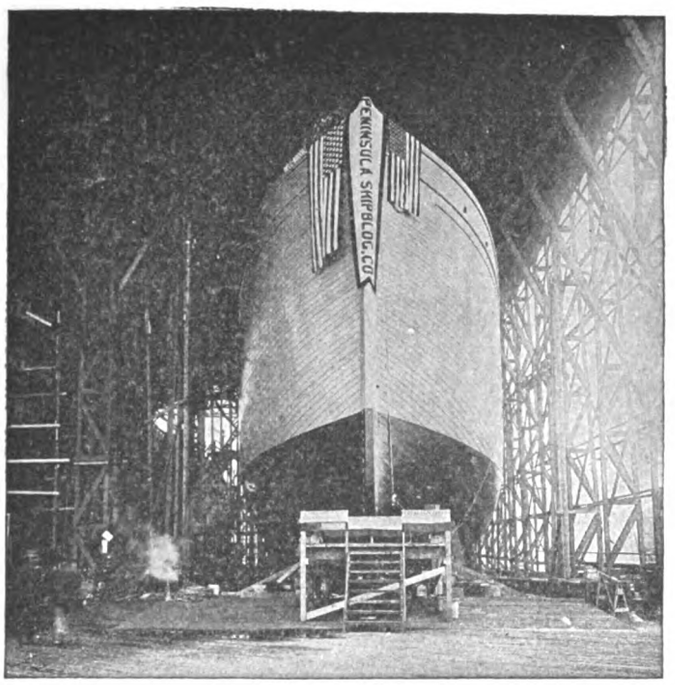
HAWSER REELS
Central Foundry Company, 90 West Street, New York
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Williams, Wm. E., 62 Front Street, New York

HAWSERS'—MANILA
(Also see Rope and Wire Rope)
American Manufacturing Company, Noble & West Streets, Brooklyn, N. Y.
Columbian Rope Company, Auburn, N. Y.
McNab Company, The, Bridgeport, Conn.
Plymouth Cordage Company, North Plymouth, Mass.
Upson-Walton Company, 280 Broadway, New York
Waterbury Company, The, 63 Park Row, New York
Whitlock Cordage Company, 46 South Street, New York
Williams, Wm. E., 62 Front Street, New York

HEAT INSULATION
(Also see Non-Conducting Coverings)
American Balsa Company, 50 East 42nd Street, New York
Magnesia Association of America, Bulletin Building, Philadelphia, Pa.

HEATERS
(Bath, Lavatory, Shower)
Alberger Pump & Condenser Company, 140 Cedar Street, New York

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



WOODEN SHIPS

Our Shipyard has been established at the strategetical point for securing 100% Economy, Efficiency and Speed in Construction of Wooden Ships.

Portland is the center of the lumber industry—Oregon contains one-fifth of all the timber in the United States—Douglas Fir is the best ship building timber in the world. Our plant is alongside a saw mill, thus eliminating freight charges.

When considering Wooden Ships, allow us to estimate.

PENINSULA SHIPBUILDING CO. PORTLAND, ORE.

EASTERN REPRESENTATIVES: TAMS, LEMOINE & CRANE, 52 Pine Street, New York

Griscom-Russell Company, 90 West Street, New York
Kearfott Engineering Company, 95 Liberty Street, New York
Mott Iron Works, J. L., Trenton, N. J.
Ross Heater & Manufacturing Company, Buffalo, N. Y.
Sands & Son Company, A. B., 22 Vesey Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

HEMP
(See Twine)

HOISTING ENGINES
American Clay Machinery Company, Liberty Building, Philadelphia, Pa.
American Engineering Company, Philadelphia, Pa.
American Shipbuilding Company, Cleveland, Ohio
Dake Engine Company, Grand Haven, Mich.
Great Lakes Engineering Works, Detroit, Mich.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Flory Manufacturing Company, S., Bangor, Pa.
Hyde Windlass Company, Bath, Maine
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McNab Company, The, Bridgeport, Conn.
Maine Electric Co., Portland, Maine
Mundy Hoisting Engine Company, J. S., Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.

HOISTING AND TRANSMISSION ROPE
(See Rope)

HOISTS, CHAIN
(See Chain Hoists)

HOISTS, ELECTRIC
(See Electric Hoists)

HOIST HOOKS
Williams, J. H., & Co., 63 Richards Street, Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

HOLDERS-ON
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.

HORIZONTAL PUNCHES
Cleveland Punch & Shear Works Company, Cleveland, Ohio

HOSE
(Also see Air Hose)
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Goodyear Tire & Rubber Co., Akron, Ohio
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.
Oldham & Son Company, George, Frankford, Philadelphia, Pa.

HOSE COUPLING
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.
Oldham & Son Company, George, Frankford, Philadelphia, Pa.

HOSE NOZZLES
Morse, Andrew J., Sons, Inc., 221 High Street, Boston, Mass.

HUMIDIFIERS
Griscom-Russell Company, 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Sturtevant Co., B. F., Hyde Park, Boston, Mass.

HYDRAULIC FITTINGS
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, Cincinnati, Ohio
Penn Seaboard Steel Corporation, Franklin Bank Building, Philadelphia, Pa.
Powell Company, The William, Cincinnati, Ohio
Watson-Stillman Company, 50 Church Street, New York
Williams Valve Company, D. T., Cincinnati, Ohio

HYDRAULIC PRESSES AND OTHER MACHINERY
Chambersburg Engineering Company, Chambersburg, Pa.
Niles-Bement-Pond Company, 111 Broadway, New York
Watson-Stillman Company, 50 Church Street, New York

HYDROMETERS
Taylor Instrument Companies, Rochester, N. Y.
NcNab Company, The, Bridgeport, Conn.

HYGRODEIKS
Taylor Instrument Companies, Rochester, N. Y.

HYGROMETERS
Taylor Instrument Companies, Rochester, N. Y.

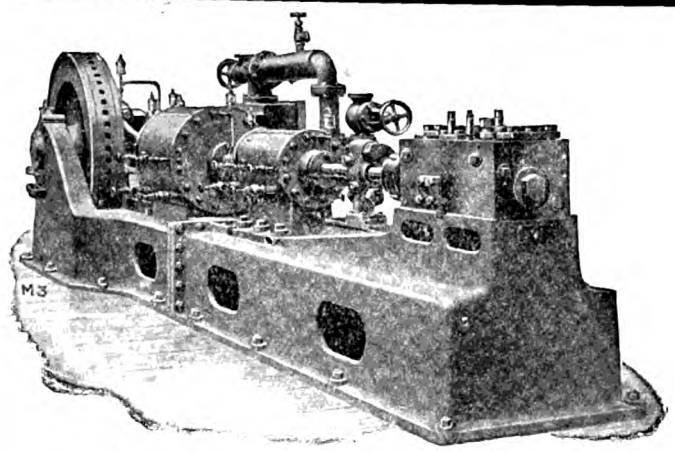
ICE DETECTORS
McNab Company, The, Bridgeport, Conn.

ICE MACHINES
(See Refrigerating Machinery)

INDICATOR CONNECTIONS
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio

INDICATORS
(Steam and Gas Engine)
American Steam Gauge & Valve Manufacturing Company, Camden Street, Boston, Mass.
Ashton Valve Co., 171 First Street, Cambridge, Mass.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Lunkenheimer Company, The, Cincinnati, Ohio
Manning, Maxwell & Moore, Inc., 119 West 40th Street, New York
McNab Company, The, Bridgeport, Conn.
Powell Company, The William, Cincinnati, Ohio

Generated on 2024-09-12 08:55 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



Dependable Refrigerating Equipment Means FRICK

They are designed to meet the practical requirements of the trade and to endure the strains of excessive overloads.

CO^2 **Compression, Ammonia Compression** and **Ammonia Absorption Refrigerating Units in any size** to suit requirements. The **Quality, Efficiency** and **Durability** of **FRICK Refrigerating Machinery** are never questioned.

WRITE FOR PRICES AND DETAILS

There is a FRICK Machine for every refrigerating purpose

Frick Company
WAYNESBORO, PA. U.S.A.
ICE MACHINERY SUPERIOR SINCE 1882

Our Engineering Department is at Your Service

BRANCHES IN ALL PRINCIPAL CITIES

Williams, Wm. E., 62 Front Street, New York

INDUSTRIAL ENGINEERS
Jacobs, J. L., & Company, Monadnock Building, Chicago, Ill.

INJECTORS
Lunkenheimer Company, The, Cincinnati, Ohio
Manning, Maxwell & Moore, Inc., 119 West 40th Street, New York
Powell Company, The William, Cincinnati, Ohio
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

INTERLOCKING RUBBER TILING
Griscom-Russell Company, 90 West Street, New York

IRON
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.

IRON CEMENT
Smooth-On Manufacturing Company, 570 Communipaw Avenue, Jersey City, N. J.

IRON PIPE
(See Pipe)

JACKS
(Pneumatic)
Gracey, R., & Sons Company, 113 First Avenue, Pittsburgh, Pa.
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Topping Brothers, 122 Chambers Street, New York
Watson-Stillman Company, 50 Church Street, New York

JACKS, HYDRAULIC
Watson-Stillman Company, 50 Church Street, New York

JACKS, STEAMBOAT RATCHET
(Pulling)
Gracey, R., & Sons Company, 113 First Avenue, Pittsburgh, Pa.
Griscom-Russell Company, 90 West Street, New York

JOURNAL BEARINGS
(See Thrust Bearings)

JUTE
American Manufacturing Company, Noble & West Streets, Brooklyn, N. Y.
Columbian Rope Company, Auburn, N. Y.

KEROSENE ENGINES
Consolidated Shipbuilding Corporation, Morris Heights, N. Y.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Mietz Machine Works, August, 428 E. 19th Street, New York
Standard Motor Construction Company, 120 Pine Street, Jersey City, N. J.
Winton Engine Works, Cleveland, Ohio
Wolverine Motor Works, Bridgeport, Conn.

LADDERS
Irving Iron Works Company, Long Island City, N. Y.
Universal Safety Tread Company, 40 Court Street, Boston, Mass.

LADDER TREADS
Irving Iron Works Company, Long Island City, N. Y.
Universal Safety Tread Company, 40 Court Street, Boston, Mass.
Williams, Wm. E., 62 Front Street, New York

LAMPS, SIGNALS AND FIXTURES
General Electric Company, Schenectady, N. Y.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Western Electric Company, 151 Fifth Avenue, New York
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
Williams, Wm. E., 62 Front Street, New York

LATHE DOGS
Williams & Company, J. H., 63 Richards Street, Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

LATHES, CRANK SHAFT, ENGINE AND TURRET
Greenfield Tap & Die Corporation, Greenfield, Mass.
Niles-Bement-Pond Company, 111 Broadway, New York

LAUNCHES AND YACHTS
(See Shipbuilders)

LAUNCHING GREASE
Sun Company, 1428 So. Penn Square, Philadelphia, Pa.
Texas Company, The, 17 Battery Place, New York

LAVATORIES
(Stateroom)
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Mott Iron Works, J. L., Trenton, N. J
Sands, A. B., & Son Company, 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

LAVATORY AND BATH HEATERS
Griscom-Russell Company, 90 West Street, New York
Sands, A. B., & Son Company, 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

LEAD PENCILS
(See Drawing Pencils)

LEATHER BELTING
Graton & Knight Manufacturing Company Worcester, Mass.
Williams, Wm. E., 62 Front Street, New York

LIFE BOATS AND RAFTS
American Balsa Company, 50 East 42nd Street, New York
American Shipbuilding Company, Cleveland, Ohio
Galbraith, C. C., & Son, 47 West Street, New York
Dravo-Doyle Company, Pittsburg, Pa.
Lane Lifeboat Company, C. M., 246 Huron Street, Brooklyn, N. Y.
McNab Company, The, Bridgeport, Conn.
Neptune Boat Works, Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

LIFE PRESERVERS
American Balsa Company, 50 East 42nd Street, New York
Ferdinand, L. W., & Company, 152 Kneeland Street, Boston, Mass.
Galbraith, C. C., & Son, 47 West Street, New York
Williams, Wm. E., 62 Front Street, New York

LIFE-SAVING DEVICES
American Balsa Company, 50 East 42nd Street, New York
Galbraith, C. C., & Son, 47 West Street, New York
Steward Davit & Equipment Corp., 17 Battery Place, New York
Williams, Wm. E., 62 Front Street, New York

LIGHTING SETS
(See Electric Plants)

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

THE ATLANTIC CORPORATION

77 Franklin Street

Boston, Massachusetts

Shipyard: Portsmouth, New Hampshire
Engine Shop: Taunton, Massachusetts

Builders 8800 ton cargo steamers
Robert Dollar type

Short delivery on 2,500 H.P. Triple Expansion Engines

LIGHTS, ELECTRIC
(See Electric Lights)

LINES—TOWING, BUOY
(See Rope)

LINOLEUM CEMENT
Ferdinand & Co., L. W., 152 Kneeland Street, Boston, Mass.

LIQUID GLUE, WATERPROOF
Ferdinand & Co., L. W., 152 Kneeland Street, Boston, Mass.

LOADING AND UNLOADING EQUIPMENT
(See Freight Handling Equipment)

LOCKS AND LATCHES
(See Ship Locks and Latches)

LOCOMOTIVE CRANES
(See Cranes)

LOG REGISTERS
American Balsa Company, 50 East 42nd Street, New York
Hand, John E., & Sons Company, Haddonfield, N. J.
McNab Company, Bridgeport, Conn.

LUBRICANTS
Cook's Sons, Adam, 708 Washington Street, New York
Dixon Crucible Company, Jos., Jersey City, N. J.
Sun Company, 1428 So. Penn Square, Philadelphia, Pa.
Texas Company, The, 17 Battery Place, New York
Williams, Wm. E., 62 Front Street, New York

LUBRICATING COMPOUND
Cook's Sons, Adam, 708 Washington Street, New York

LUBRICATING STRAINERS
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

LUBRICATORS
Cook's Sons, Adam, 708 Washington Street, New York
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Sun Company, 1428 So. Penn Square, Philadelphia, Pa.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.
Williams Valve Company, D. T., Cincinnati, Ohio

LUMBER
Long-Bell Lumber Company, R. A. Long Building, Kansas City, Mo.

MACHINISTS
Thacher Propeller & Foundry Corporation, Albany, N. Y.

MACHINE GUARDS
Page Steel & Wire Company, 30 Church Street, New York

MACHINE TOOLS
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Greenfield Tap & Die Corporation, Greenfield, Mass.
Niles-Bement-Pond Company, 111 Broadway, New York
Pratt & Whitney Company, 111 Broadway, New York

MACHINISTS' TOOLS
Williams & Co., J. H., 63 Richards Street, Brooklyn, N. Y.

MANGANESE BRONZE CASTINGS
American Manganese Bronze Company, Holmesburg, Philadelphia, Pa.
Columbian Bronze Corporation, 50 Church Street, New York
Cramp, Wm., & Sons, Ship & Engine Bldg. Co., Richmond & Norris Streets, Philadelphia, Pa.
Griscom-Russell Company, 90 West Street, New York
Hyde Windlass Company, Bath, Maine
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio

MAGNESIA GOODS AND MATERIALS
Magnesia Association of America, Bulletin Building, Philadelphia, Pa.

MALLEABLE AND STEEL CASTINGS
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Malleable Iron Fittings Company, Branford, Conn.

MANDRELS
Pratt & Whitney Co., 111 Broadway, New York
Whitman & Barnes Mfg. Company, Akron, Ohio

MANHOLES
Thacher Propeller & Foundry Corporation, Albany, N. Y.

MANILA AND SISAL ROPE
(See Rope)

MANIFOLDS
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Kerr Machinery Corporation, Kerr Building, Detroit, Mich.

MANUFACTURING PLANTS
(See Builders)

MARINE BOILER HEADS
(See Boiler Heads)

MARINE CABLEWAYS
Lidgerwood Manufacturing Company, 96 Liberty Street, New York

MARINE COATINGS
(See Anti-Rust Coatings)

MARINE COPPER WORK
Badger, E. B., & Sons Company, 63 Pitts Street, Boston, Mass.

MARINE DECKING
(See Decking)

MARINE ELECTRICAL EQUIPMENT
(See Electrical Fittings and Supplies)

MARINE ENGINES
(See Engines, Propelling)

MARINE ENGINEERS
(See Engineers, Consulting)

MARINE FORGINGS
(See Forgings)

MARINE GLUE
Ferdinand & Co., L. W., 152 Kneeland Street, Boston, Mass.
Williams, Wm. E., 62 Front Street, New York

MARINE HARDWARE
American Shipbuilding Company, Cleveland, Ohio

Generated on 2024-09-12 08:14 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Bridgeport Brass Co., Bridgeport, Conn.
Consolidated Shipbuilding Corporation, Morris Heights, N. Y.
Ferdinand & Co., L. W., 152 Kneeland Street, Boston, Mass.
Rostand Manufacturing Company, Milford, Conn.
Sands & Son Company, A. B., 22 Vesey Street, New York
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Tiebout, W. & J., 118 Chambers Street, New York
Topping Brothers, 122 Chambers Street, New York
Upson-Walton Company, 280 Broadway, New York
Wilcox, Crittenden & Co., Inc., Middletown, Conn.
Williams, Wm. E., 62 Front Street, New York

MARINE HEATERS
(See Heaters)

MARINE INTERCOMMUNICATION EQUIPMENT
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Klaxon Company, Metropolitan Tower, New York
Western Electric Company, 151 Fifth Avenue, New York

MARINE LIGHTING SETS
(See Electric Plants)
Williams, Wm. E., 62 Front Street, New York

MARINE PAINT
(Also see Paint)
American Bitumastic Enamels Company, 17 Battery Place, New York
Dixon Crucible Company, Joseph, Jersey City, N. J.
DuPont, deNemours & Co., E. J., Wilmington, Del.
International Compositions Company, 18 Broadway, New York
Toch Brothers, 320 Fifth Avenue, New York
Williams, Wm. E., 62 Front Street, New York

MARINE PLUMBING
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Mott Iron Works, J. L., Trenton, N. J.
Sands & Son Company, A. B., 22 Vesey Street, New York

MARINE RAILWAY BUILDERS
Crandall Engineering Company, East Boston, Mass.

MARINE RAILWAYS
(See Dry Docks)

MARINE RANGES
(See Ranges)

MARINE REFRIGERATION
(See Refrigerating Machinery)

MARINE REPAIRS
(See Shipbuilders)

MARINE SHAFTING
(See Shafting)

MARINE SPECIALTIES
(See Steam Specialties)

MARINE SUPERHEATERS
Babcock & Wilcox Company, 85 Liberty Street, New York
Badenhausen Company, 1425 Chestnut Street, Philadelphia, Pa.
Heine Safety Boiler Company, 5322 Marcus Avenue, St. Louis, Mo.
Locomotive Superheater Company, 30 Church Street, New York
Power Specialty Company, 111 Broadway, New York

MARINE SUPPLIES
Ferdinand & Company, L. W., 152 Kneeland Street, Boston, Mass.
Tiebout, W. & J., 118 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

MARINE WIRING DEVICES
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bryant Electric Company, Bridgeport, Conn.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
General Electric Company, Schenectady, N. Y.
Page Steel & Wire Company, 30 Church Street, New York
Western Electric Company, 151 Fifth Avenue, New York

MASTS, TUBULAR STEEL
National Tube Company, Frick Building, Pittsburgh, Pa.

MATTRESSES
Bernstein Manufacturing Company, 3rd & Allegheny Avenues, Philadelphia, Pa.
Foster Bros. Manufacturing Company, Utica, N. Y.
Southern-Rome Company, 617a West Pratt Street, Baltimore, Md.

MECHANICAL DRAFT
Steam Motors Company, Springfield, Mass
Sturtevant Company, B. F., Hyde Park, Boston, Mass.

MECHANICAL TELEGRAPHS
Chadburn (Ship) Telegraph Company Troy, N. Y.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Marconi Wireless Telegraph Co., Woolworth Building, New York
McNab Company, The, Bridgeport, Conn
Williams, Wm. E., 62 Front Street, New York

METAL SLITTING SAWS
Morse Twist Drill & Machine Company New Bedford, Mass.

METALLIC PACKING
(Also see Packing)
Allen & Simmonds, Ltd., Reading, England
France Packing Company, Tacony, Philadelphia, Pa.
Martell Packings Company, Elyria, Ohio
U. S. Metallic Packing Company, Philadelphia, Pa.

METERS, ELECTRIC
General Electric Company, Schenectady N. Y.
Western Electric Company, 151 Fifth Avenue, New York
Western Electrical Instrument Company 53 Weston Avenue, Newark, N. J.

MILLING MACHINES
Greenfield Tap & Die Corporation, Greenfield, Mass.
Niles-Bement-Pond Company, 111 Broadway, New York
Standard Tool Company, Cleveland, Ohio

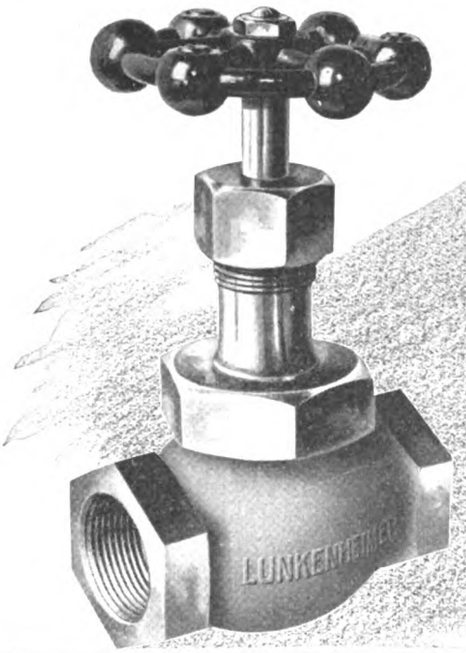
MINERAL WOOL
(See Non-Conducting Covering)

MONEL METAL
International Nickel Co., 43 Exchange Place, New York

MOORING ENGINES
American Engineering Company, Philadelphia, Pa.
Dake Engine Company, Grand Haven, Mich.
Flory Manufacturing Company, S., Bangor, Pa.
Hyde Windlass Company, Bath, Maine
Lidgerwood Manufacturing Company, 96 Liberty Street, New York

Generated on 2024-09-12 08:09 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

LUNKENHEIMER PRODUCTS



To the user they need no introduction—their high quality, reliability and serviceability having made a lasting impression.

Others seeking the "better grade" of Engineering Specialties will find in those bearing the name "LUNKENHEIMER" that high quality of design, materials and workmanship which is synonymous of *the best.*

"LUNKENHEIMER PRODUCTS" embraces a variety of high grade specialties for use on Steam Engines, Boilers, Locomotives, Steamships, Automobiles, Motor Boats, Airplanes, Tractors, etc.

Each device is designed for a particular purpose, and will perform the functions for which it is intended, with a *certainty* that insures safe, economical and reliable service.

Leading dealers everywhere, sell *Lunkenheimer Products.* Specify and insist on having the genuine.

Write for descriptive literature.

THE LUNKENHEIMER CO.
-"QUALITY"-

Largest Manufacturers of High Grade Engineering Specialties in the World

New York Chicago CINCINNATI London Boston

32 17-25

Maine Electric Co., Portland, Manie
Mundy, J. S., Hoisting Engine Company, Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.

MOORING FIXTURES
Central Foundry Company, 90 West Street, New York
Penn Seaboard Steel Corporation, Franklin Bank Building, Philadelphia, Pa.
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Thacher Propeller & Foundry Corporation, Albany, N. Y.

MOORING PORTS AND RINGS
Central Foundry Company, 90 West Street, New York
Stevens-Aylsworth Co., Inc., 253 Broadway, New York

MOTOR BOATS
(See Launches and Yachts)

MOTOR BOAT SUPPLIES
Ferdinand & Co., L. W., 152 Kneeland Street, Boston, Mass.
Tiebout, W. & J., 118 Chambers Street, New York
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

MOTORS, ELECTRIC
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
General Electric Company, Schenectady, N. Y.
Western Electric Company, 151 Fifth Avenue, New York

MOTORS, GASOLINE
(See Gasoline Engines)

MOTORS, STEAM
Steam Motors Company, Springfield, Mass.

MULTIPLE DRILLS
Niles-Bement-Pond Company, 111 Broadway, New York

MULTIPLE PUNCHES
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Niles-Bement-Pond Company, 111 Broadway, New York
Thomas Spacing Machine Company, Fulton Building, Pittsburgh, Pa.

MULTIWHIRL OIL COOLERS
Griscom-Russell Company, 90 West Street, New York

NAILS
Malleable Iron Fittings Company, Branford, Conn.
Page Steel & Wire Company, 30 Church Street, New York

NAUTICAL INSTRUMENTS
Hand, John E., & Sons Company, Haddonfield, N. J.
McNab Company, The, Bridgeport, Conn.
Sperry Gyroscope Company, Brooklyn, N. Y.
Upson-Walton Company, 280 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

NAVAL ARCHITECTS
Bogert, John L., 165 Broadway, New York
Brenzinger, A. H., 41 Union Square, New York
Churchill & Macleod, 512 Fifth Avenue, New York
Cox & Stevens, 15 William Street, New York
Donnelly, Wm. T., 17 Battery Place, New York
Ferris, Theodore, 30 Church Street, New York
Haight, Robert S., 17 State Street, New York
Harris, Leonard B., Woolworth Building, New York
Hough, Edward S., 16 California Street, San Francisco, Cal.
Johnson, Arthur F., 535 Cass Street, Milwaukee, Wis.
Lysholm, Henry, Philadelphia Stock Exchange Building, Philadelphia, Pa.
McClelland, N. E., & Co., Ltd., 2 Stone Street, New York
Marine Surveying & Adjusting Co., 33 Broadway, New York
Nilson, Leonard J., Baltimore, Md.
Watts, J. Murray, 136 South 4th Street, Philadelphia, Pa.
Whittelsey & Whittelsey, Whitehall Building, New York

NEEDLE VALVES
(See Valves)

NIPPLES
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, The, Cincinnati, Ohio

NITROGEN
Linde Air Products Co., The, 30 E. 42nd Street, New York

NON-CONDUCTING COVERINGS
Magnesia Association of America, Bulletin Building, Philadelphia, Pa.
Thorsen, P. S., & Co., Inc., 81 Coffey Street, Brooklyn, N. Y.

NON TOPPLING BLOCKS
American Balsa Company, 50 East 42nd Street, New York

NOZZLES
(See Hose Nozzles)

NUTS
(See Bolts and Nuts)
Camden Forge Company, Camden, N. J.
Galbraith, C. C., & Son, 47 West Street, New York
Russell, Burdsall & Ward Bolt & Nut Co., Portchester, N. Y.
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

OAKUM
American Balsa Company, 50 East 42nd Street, New York
American Manufacturing Company, Noble & West Streets, Brookyln, N. Y.
Galbraith, C. C., & Son, 47 West Street, New York
Stratford Oakum Company, George, Jersey City, N. J.

OFFICE FILING EQUIPMENT
Ulrich Planfiling Equipment Company, Jamestown, N. Y.

OIL
(See Lubricants)

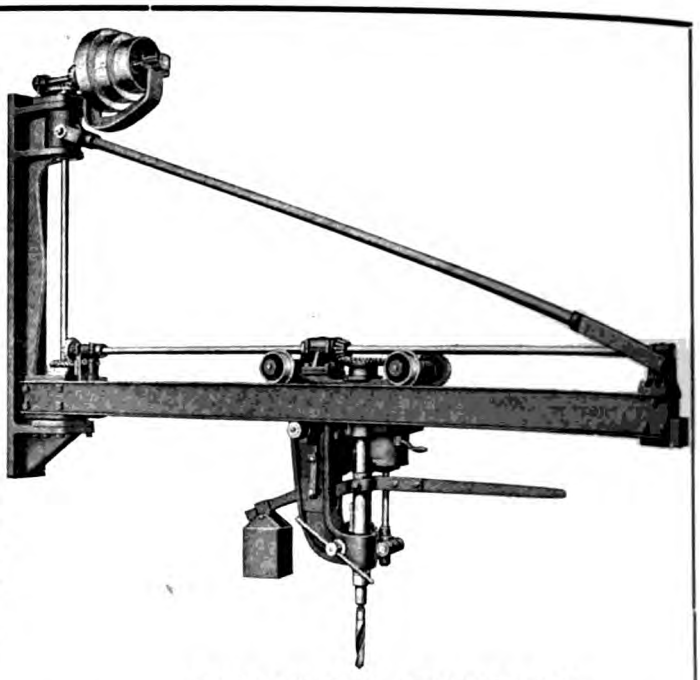
OIL BURNERS, FUEL
(See Fuel Oil Burners)

OIL BURNING EQUIPMENT
Kinney Manufacturing Company, Boston, Mass.
Redington Standard Fittings Co., Bethlehem, Pa.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
White Fuel Oil Engineering Corp., 601 Washington Street, New York
Williams, Wm. E., 62 Front Street, New York

Generated on 2024-09-12 09:02 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

If You Want Production

You can't do better than install this drill in your plant. We'll say you won't have it in operation more than a month before you will begin to congratulate yourself on your judgment in adding this machine to your equipment. Materials and workmanship that you can depend upon to the limit are features of the construction, and our bulletin will give full details.



Get It Today

Lynd-Farquhar Company
Boston, Mass.

MADE IN FOUR STANDARD SIZES

Rated Size	Drills to Center of	Wall to End of Arm
7 ft.	14 ft. circle	10 ft.
9 ft.	18 ft. circle	12 ft.
11 ft.	22 ft. circle	14 ft.
13 ft.	26 ft. circle	16 ft.

Other lengths of arm to suit requirements.

OIL COOLERS
Griscom-Russell Company, 90 West Street, New York
Ross Heater & Mfg. Co., Buffalo, N. Y.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

OIL CUPS
Cook's Sons, Adam, 708 Washington Street, New York
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Sun Company, 1428 So. Penn Square, Philadelphia, Pa.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

OIL ENGINES
(See Engines, Oil)

OIL FUEL
Sun Company, 1428 So. Penn Square, Philadelphia, Pa.
Texas Company, The, 17 Battery Place, New York

OIL FUEL APPARATUS
(See Oil-Burning Equipment)

OIL FURNACES
American Shop Equipment Company, Hudson Terminal Building, New York
Baush Machine Tool Company, 165 Broadway, New York

OIL GAUGES
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Union Water Meter Company, Worcester, Mass.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

OIL HEATERS AND COOLERS
Griscom-Russell Company, 90 West Street, New York
Ross Heater & Manufacturing Company, Buffalo, N. Y.
Row & Davis, Engineers, Inc., 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

OIL AND PAINT STORAGE SYSTEM
Wayne Oil Tank & Pump Co., 589 Canal Street, Fort Wayne, Ind.

OIL PUMPS
Blackmer Rotary Pump Company, Book Building, Detroit, Mich.
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Davidson, M. T., Co., 154 Nassau Street, New York
Dean Bros. Steam Pump Works, Indianapolis, Ind.
Epping-Carpenter Pump Company, Pittsburgh, Pa.
Kinney Manufacturing Company, Boston, Mass.
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Ross Heater & Manufacturing Company, Buffalo, N. Y.
Steam Motors Company, Springfield, Mass.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Terry Steam Turbine Company, Hartford, Conn.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.
Williams Valve Company, D. T., Cincinnati, Ohio
Worthington Pump & Machinery Corporation, 115 Broadway, New York

OIL PURIFIERS
De Laval Separator Company, 165 Broadway New York
Griscom-Russell Company, 90 West Street, New York
Ohio Blower Company, Cleveland, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

OIL STORAGE SYSTEMS
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

OIL TANKS
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Wayne Oil Tank & Pump Co., 589 Canal Street, Fort Wayne, Ind.

OIL TANKERS
(See Tank Ships)

OILING SYSTEMS
(Also see Lubricants)
Cook's Sons, Adam, 708 Washington Street, New York
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

ORE-HANDLING MACHINERY
(See Coal-Handling Machinery)

OXY-ACETYLENE WELDING AND CUTTING
General Welding & Equipment Company 107 Massachusetts Avenue, Boston, Mass.
Linde Air Products Co., The, 30 E. 42nd Street, New York
Oxweld Acetylene Company, Newark, N. J.
Prest-O-Lite Company, Inc., 30 East 42nd Street, New York
Vulcan Iron Works, Inc., Foot of Hudson Street, Jersey City, N. J.

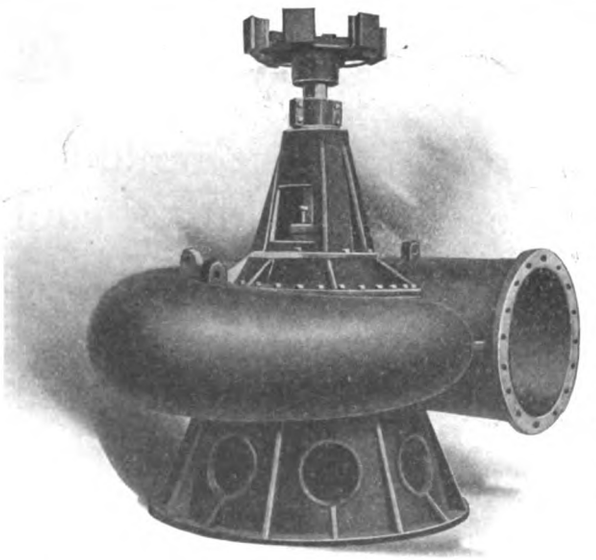
OXYGEN
Linde Air Products Company, 30 E. 42nd Street, New York
Oxweld Acetylene Company, Newark, N. J.
Prest-O-Lite Company, 30 East 42nd Street, New York

PACKING
(Also see Metallic Packing and Ammonia Packing)
France Packing Company, Tacony, Philadelphia, Pa.
Goodyear Tire & Rubber Co., Akron, Ohio
Johns-Pratt Company, Hartford, Conn.
Martell Packings Co., Elyria, Ohio
United States Metallic Packing Co., Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

PACKING, ASBESTOS
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Williams, Wm. E., 62 Front Street, New York

PACKINGS, LEATHER
Watson-Stillman Company, 50 Church St., New York

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



36″ Motor Driven Vertical Dry Dock Pump

MORRIS PUMPS

are operating the dry docks recently built at Charleston, Savannah, Beaumont, Jacksonville, New Orleans and Sparrows Point. MORRIS also equipped the famous Dewey Floating Dry Dock and numerous other big Docks, such as the Charleston Navy Yard, where 3-48″ discharge pumps are operated.

Have you our catalog?

Morris Machine Works

Established in 1864 **BALDWINSVILLE, N. Y.**

Builders of Dredges, Centrifugal Pumps and Steam Engines

Branch Offices in Principal Cities

PAINT
American Bitumastic Enamels Company, 17 Battery Place, New York
Dixon Crucible Company, Joseph, Jersey City, N. J.
DuPont, deNemours & Co., E. I., Wilmington, Del.
International Compositions Company, 18 Broadway, New York
Marine Decking & Supply Co., 1011 Chestnut Street, Philadelphia, Pa.
Texas Company, The, 17 Battery Place, New York
Toch Brothers, 320 Fifth Avenue, New York
Williams, Wm. E., 62 Front Street, New York

PAINT AND OIL STORAGE SYSTEM
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

PAINT SPRAYING EQUIPMENT
(See Pneumatic Paint Spraying Equipment)

PANEL BOARDS
(Marine)
Benjamin Electric Manufacturing Company, Chicago, Ill.

PANELLING
(Marine Fireproof)
Marine Decking & Supply Company, 1011 Chestnut Street, Philadelphia, Pa.

PARTITIONS
(Marine Fireproof)
Marine Decking & Supply Company, 1011 Chestnut Street, Philadelphia, Pa.

PATCH BOLTS
Topping Brothers, 122 Chambers Street.
Penn Seaboard Steel Corp., Franklin Bank Building, Philadelphia, Pa.
New York

PATTERNS
Thacher Propeller & Foundry Corporation, Albany, N. Y.

PENCILS
(See Drawing Pencils)

PHOSPHER BRONZE CASTINGS
American Manganese Bronze Company, Holmesburg, Philadelphia, Pa.
Columbian Bronze Corporation, 50 Church Street, New York
Griscom-Russell Company, 90 West Street, New York
Hyde Windlass Company, Bath, Maine
Lunkenheimer Company, Cincinnati, Ohio

PILE DRIVERS
Flory, S., Manufacturing Company, Bangor, Pa.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McMyler-Interstate Company, Bedford, Ohio
Mundy Hoisting Engine Company, J. S., Newark, N. J.

PIPE
American Spiral Pipe Works, P. O. 485, Chicago, Ill.
National Tube Company, Frick Building, Pittsburgh, Pa.
Reading Iron Co., Reading, Pa.
Watson-Stillman Company, 50 Church Street, New York
Williams, Wm. E., 62 Front Street, New York

PIPE BENDING MACHINES
American Pipe Bending Machine Co., 99 Pearl Street, Boston, Mass.
Badger, E. B., & Sons Company, 63 Pitts Street, Boston, Mass.
Buffalo Forge Company, Buffalo, N. Y.
Greenfield Tap & Die Corporation, Greenfield, Mass.
Watson-Stilman Company, 50 Church Street, New York

PIPE COVERING
(See Non-Conducting Covering)

PIPE CUTTING AND THREADING MACHINES
Greenfield Tap & Die Corporation, Greenfield, Mass.
Niles-Bement-Pond Company, 111 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

PIPE EXPANDING AND FLANGING MACHINES
Lovekin Pipe Expanding & Flanging Machine Co., Philadelphia Bank Building, Philadelphia, Pa.
Watson-Stillman Company, 50 Church Street, New York

PIPE FLANGES
(See Flanges)

PIPE UNIONS
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Dart Manufacturing Company, E. M., Providence, R. I.
Lunkenheimer Company, The, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

PIPE WELDING
Metal & Thermit Corporation, 120 Broadway, New York

PIPE WRENCHES
Greenfield Tap & Die Corporation, Greenfield, Mass.
Williams & Company, J. H., 63 Richards Street, Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

PISTON RINGS
(See Packings)

PISTON RODS
Heppenstall Forge & Knife Company, Pittsburg, Pa.
Pacific Construction & Engineering Co., 2917 Whatcom Avenue, Seattle, Wash.

PLANERS
(Metal Working)
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Lynd-Farquhar Company, 419 Atlantic Avenue, Boston, Mass.
Niles-Bement-Pond Company, 111 Broadway, New York

PLANIMETERS
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.
Williams, Wm. E., 62 Front Street New York

PLATE-BENDING ROLLS
(See Rolls, Bending & Straightening)

PLATE AND ANGLE HEATING FURNACES
American Shop Equipment Company, Hudson Terminal Building, New York
Baush Machine Tool Company, 165 Broadway, New York

PLATE CASTORS
(See Castors)

PLATE GLASS EQUIPMENT
Hooven, Owens, Rentschler Co., Hamilton, Ohio

PLATE PUNCH TABLES
Norbom Engineering Company, Darby, Pa.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

PEACE TIME APPROVAL!

The Skinner and Eddy Corporation are building four 10,000 tonners for their own account—Award us contract for our geared spring quadrant type steam steering engines with telemotors.

Others orders received since the war emergency include steam anchor windlasses, electric windlasses, electric cargo winches, capstans, etc.

Equipment with a pedigree
Write for full particulars

Pacific Machine Shop and Mfg. Co.

General Office and Works: **SEATTLE, U.S.A.**

Thomas Spacing Machine Company, Fulton Building, Pittsburgh, Pa.

PLATES
(See Steel Plates and Shapes)

PLUGS AND RECEPTACLES—WATERTIGHT
Benjamin Electric Manufacturing Company, Chicago, Ill.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Western Electric Company, 151 Fifth Avenue, New York
Williams, Wm. E., 62 Front Street, New York

PLUMBAGO
(Also see Graphite)
Dixon, Jos., Crucible Company, Jersey City, N. J.
Williams, Wm. E., 62 Front Street, New York

PLUMBERS' TOOLS
Williams & Co., J. H., 63 Richards St., Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

PLUMBING
(See Marine Plumbing)

PLUNGER PUMPS FOR OIL BURNING EQUIPMENT
Kinney Manufacturing Company, Boston, Mass.

PNEUMATIC DRILLS
(See Pneumatic Tools)

PNEUMATIC HAMMERS
(See Pneumatic Tools)

PNEUMATIC HOSE
(See Air Hose)
Sands, A. B., & Son Company, 22 Vesey Street, New York

PNEUMATIC PAINT SPRAYING EQUIPMENT
Spray Engineering Company, Boston, Mass.

PNEUMATIC RIVETERS
Ingersoll-Rand Company, 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.
Oldham, George & Son Company, Frankford, Philadelphia, Pa.
Watson-Stillman Company, 50 Church Street, New York

PNEUMATIC SEPARATORS
Griscom-Russell Company, 90 West Street, New York

PNEUMATIC TOOLS
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Keller Pneumatic Tool Company, Grand Haven, Mich.
Oldham, Geo., & Son Company, Frankford, Philadelphia, Pa.

POP SAFETY VALVES
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Dew Valve Company, 149 Broadway, New York
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

POPPETT VALVES
(See Valves)

PORTABLE DRILLS
General Electric Company, Schenectady, N. Y.
Lynd-Farquhar Company, 419 Atlantic Avenue, Boston, Mass.

PORT LIGHTS
(See Air Ports)

POWER HAMMERS
Chambersburg Engineering Company, Chambersburg, Pa.

POWER PUNCHES
Watson-Stillman Company, 50 Church Street, New York

POWER PUNCHES AND SHEARS
Buffalo Forge Company, Buffalo, N. Y.
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Niles-Bement-Pond Company, 111 Broadway, New York
Norbom Engineering Company, Darby, Pa.

POWER RIVETERS
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York
Niles-Bement-Pond Company, 111 Broadway, New York
Oldham, George, & Son Company, Frankford, Philadelphia, Pa.
Watson-Stillman Company, 50 Church Street, New York

POWER SHEARS
Buffalo Forge Company, Buffalo, N. Y.
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Niles-Bement-Pond Company, 111 Broadway, New York
Quickwork Company, St. Marys, Ohio

PRESSES
(See Hydraulic Presses)

PRESSURE REGULATORS
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, Cincinnati, Ohio
Mason Regulator Company, Dorchester Centre, Boston, Mass.
Powell Company, The William, Cincinnati, Ohio
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa
Williams, Wm. E., 62 Front Street, New York

PROFESSIONAL CARDS
Bogert, John L., 165 Broadway, New York
Brenzinger, A. H., 41 Union Square, New York
Churchill & MacLeod, 512 Fifth Avenue, New York
Ferris, Theodore, 30 Church Street, New York
Haight, Robert S., 17 State Street, New York
Harris, Leonard B., Woolworth Building, New York
Hough, Edward S., 16 California Street, San Francisco, Calif.
Jacobs, J. L., & Company, Monadnock Building, Chicago, Ill.
Johnson, Arthur F., 535 Cass Street, Milwaukee, Wis.
Lysholm, Henry, Philadelphia Stock Exchange Building, Philadelphia, Pa.
McClelland, N. E. & Co., Ltd., 2 Stone Street, New York
Nilson, Leonard J., Baltimore, Md.

Generated on 2024-09-12 08:46 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Hardie-Tynes Manufacturing Co.

ENGINE BUILDERS

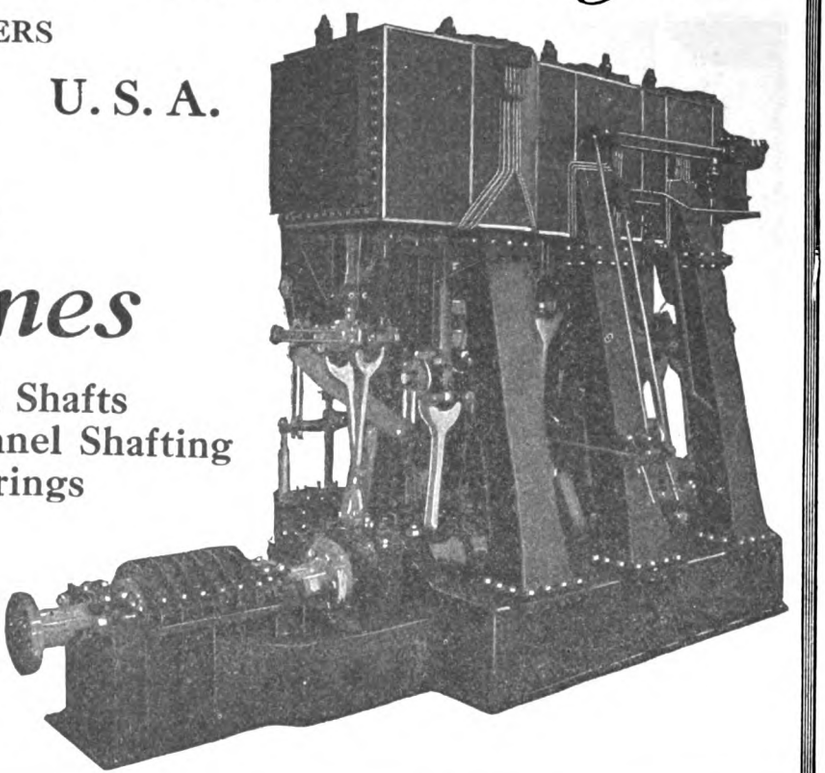
Birmingham, Ala. U. S. A.

Marine Engines

Stern Tubes
Propellers
Rudders
Tail Shafts
Tunnel Shafting
Bearings

Heavy Gray Iron and Semi-Steel Castings

Prices Submitted on Application



Williams, Wm. E., 62 Front Street, New York
Watts, J. Murray, 136 South 4th St., Philadelphia, Pa.

PROJECTORS
(See Searchlights)

PROPELLER WHEEL DESIGNS
Thacher Propeller & Foundry Corporation, Albany, N. Y.

PROPELLER WHEELS
American Manganese Bronze Company, Holmesburg, Philadelphia, Pa.
Columbian Bronze Corporation, 50 Church Street, New York
Consolidated Shipbuilding Corporation, Morris Heights, New York
Cramp, Wm., & Sons, Ship & Engine Bldg. Co., Richmond & Norris Sts., Philadelphia, Pa.
Donnelly, Wm. T., 17 Battery Place, New York
Great Lakes Engineering Works, Detroit, Mich.
Hardie-Tynes Manufacturing Company, Birmingham, Ala.
Hyde Windlass Company, Bath, Maine
Kearfott Engineering Company, 95 Liberty Street, New York
Kerr Machinery Corporation, Kerr Building, Detroit, Mich.
Penn Seaboard Steel Corporation, Franklin Bank Bldg., Philadelphia, Pa.
Thacher Propeller & Foundry Corporation, Albany, N. Y.
Trout Company, H. G., Buffalo, N. Y.

PUMP GOVERNORS
Mason Regulator Company, Dorchester Centre, Boston, Mass.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

PUMPING MACHINERY
(See Engines, Pumping)

PUMPS
Alberger Pump & Condenser Company, 140 Cedar Street, New York
Blackmer Rotary Pump Company, Book Building, Detroit, Mich.
Buffalo Steam Pump Company, Buffalo, N. Y.
Cameron Steam Pump Works, A. S., 11 Broadway, New York
Chambersburg Engineering Co., Chambersburg, Pa.
Davidson Company, M. T., 154 Nassau Street, New York
Dean Brothers Steam Pump Works, Indianapolis, Ind.
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
Epping-Carpenter Pump Company, Pittsburgh, Pa.
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Howden, James, & Company, Wellsville, N. Y.
Hyde Windlass Company, Bath, Maine
Kingsford Foundry & Machine Co., Oswego, N. Y.
Kinney Manufacturing Company, Boston, Mass.
Morris Machine Works, Baldwinsville, N. Y.
Row & Davis, Engineers, Inc., 90 West Street, New York
Sands & Son Company, A. B., 22 Vesey Street, New York
Steam Motors Company, Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Watson-Stillman Company, 50 Church Street, New York
Wheeler Condenser & Engineering Company, Carteret, N. J.
Wheeler Manufacturing Co., C. H., Philadelphia, Pa.
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.
Williams, Wm. E., 62 Front Street, New York
Worthington Pump & Machinery Corporation, 115 Broadway, New York

PUNCHING MACHINES
(See Power Punches)

PUNCHES AND DIES
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Cleveland Steel Tool Company, 660 E. 82d Street, Cleveland, Ohio
Pratt & Whitney Co., 111 Broadway, New York

PUNCHES, SHEARS AND BAR CUTTERS, COMBINED
Buffalo Forge Company, Buffalo, N. Y.

PUNCHING AND SHEARING MACHINES
(See Power Punches and Shears)

PUNCH TABLES
(See Spacing Tables)

PUSH BUTTONS
Bryant Electric Company, Bridgeport, Conn.
Edwards & Co., Inc., 140th & Exterior Streets, New York

PYROMETERS
Locomotive Superheater Company, 30 Church Street, New York
Taylor Instrument Companies, Rochester, N. Y.
Williams, Wm. E., 62 Front Street, New York

QUADRANT DAVITS
(See Davits)

RADIAL DRILLS
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Lakeside Bridge & Steel Company, 139 Villard Avenue, No. Milwaukee, Wis.
Lynd-Farquhar Company, 419 Atlantic Avenue, Boston, Mass.
Niles-Bement-Pond Company, 111 Broadway, New York

RADIO APPARATUS
Cutting & Washington Radio Corporation, 6 West 48th Street, New York
Kilbourne & Clark Manufacturing Company, Seattle, Wash.
Livingstone & Co., J., Grand Central Terminal, New York
Marconi Wireless Telegraph Co. of America, Woolworth Building, New York

RAFTS
(See Lifeboats and Rafts)

RAILWAY DRY DOCKS
Crandall Engineering Company, 102 Border Street, East Boston, Mass.

RANGE FINDERS
McNab Company, The, Bridgeport, Conn.

RANGES
Sands, A. B., & Son Company, 22 Vesey Street, New York

RASPS
Nicholson File Company, Providence, R. I.

RATCHET JACKS
(Pulling and Pushing)
Gracey & Sons Company, R., 113 First Avenue, Pittsburgh, Pa.

REAMERS
Brubaker & Bros., W. L., 50 Church Street, New York
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.

Generated on 2024-09-12 08:12 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

SPRACO

SPARCO PNEUMATIC PAINTING EQUIPMENT

Increases Production---Decreases Expenses

You will be surprised how quickly one man can finish a job which ordinarily takes from five to twelve experienced painters.

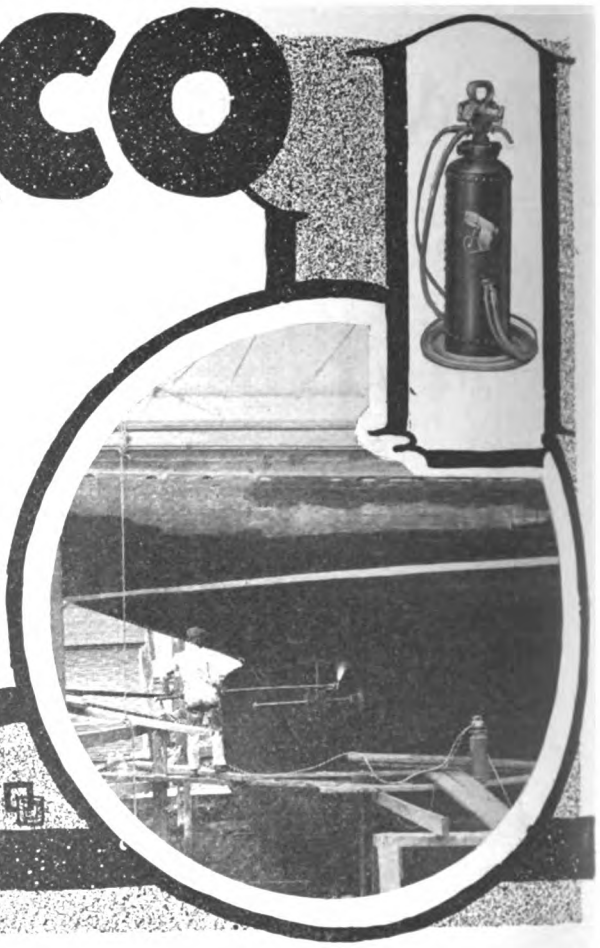
Used in many shipyards, delivers daily, saves paint, besides.

Your first job will pay for it.

Bulletin P-26 proves it—Send for it.

SPRAY ENGINEERING CO.

BOSTON, MASS., U. S. A.



Greenfield Tap & Die Corporation, Greenfield, Mass.
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Morse Twist Drill & Machine Company, New Bedford, Mass.
Norbom Engineering Company, Darby, Pa.
Pratt & Whitney Co., 111 Broadway, New York
Rich Tool Company, Railway Exchange, Chicago, Ill.
Standard Tool Company, Cleveland, Ohio
United States Electrical Tool Co., Cincinnati, Ohio
Whitman & Barnes Manufacturing Co., Akron, Ohio

REAMING MACHINES
Lakeside Bridge & Steel Co., 139 Villard Ave., No. Milwaukee, Wis.

RECLAIMING SYSTEMS FOR OIL
DeLaval Separator Company, 165 Broadway, New York
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

RECORDING INSTRUMENTS
(Also see Steam Gauges)
Taylor Instrument Companies, Rochester, N. Y.

REDUCING GEARS
(See Gears)

REDUCING VALVES
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, Cincinnati, Ohio
Mason Regulator Company, Dorchester Center, Boston, Mass.
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

REFLEX WATER GAUGES
Jerguson Gage & Valve Company, Winter Hill, Somerville, Mass.

REFRIGERATING MACHINERY
Brunswick Refrigerating Company, New Brunswick, N. J.
Frick Company, Waynesboro, Pa.
Griscom-Russell Company, 90 West Street, New York
Kroeschell Bros. Ice Machine Co., 472 W. Erie Street, Chicago, Ill.
Norwalk Iron Works, South Norwalk, Conn.
Refrigeration Engineering Company, Toledo, Ohio
Remington Machine Company, Wilmington, Del.
Roelker, H. B., 41 Maiden Lane, New York
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.
York Manufacturing Company, York, Pa.

REGULATING VALVES
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, Cincinnati, Ohio
Mason Regulator Company, Dorchester Centre, Boston, Mass.
Powell Company, The William, Cincinnati, Ohio
Sands, A. B., & Son Company, 22 Vesey Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Union Water Meter Company, Worcester, Mass.
Williams, Wm. E., 62 Front Street, New York

RELEASING GEAR
American Balsa Company, 50 East 42d Street, New York
Stewart Davit & Equipment Corporation, 17 Battery Place, New York

RELIEF VALVES
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Dew Valve Company, 149 Broadway, New York
Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Watson-Stillman Company, 50 Church Street, New York
Williams, Wm. E., 62 Front Street, New York

REVOLUTION COUNTERS
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Cory, Chas. & Son, Inc., 290 Hudson Street, New York
Chadburn (Ship) Telegraph Company, Troy, N. Y.
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

RHEOSTATS
General Electric Company, Schenectady, N. Y.
Western Electric Company, 151 Fifth Avenue, New York

RIGGING
(See Rope; also Wire Rope)

RIVER BOATS
(See Shipbuilders)

RIVETS
American Flexible Bolt Company, Union Bank Bldg., Pittsburgh, Pa.
Carlin, Anthony, Cleveland, Ohio
Champion Rivet Company, Cleveland, Ohio
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.
Scully Steel & Iron Company 2364 So Ashland Avenue, Chicago, Ill.
Severance Manufacturing Co., S. Glassport Pa.
Topping Brothers, 122 Chambers Street, New York

RIVET BUSTERS, RIVET CLAMPS AND RIVET TONGS
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway New York
Keller Pneumatic Tool Company, Grand Haven, Mich.
Topping Brothers, 122 Chambers Street, New York

RIVET HEATING FURNACES
American Shop Equipment Company, Hudson Terminal Building, New York
Baush Machine Tool Company, 165 Broadway, New York

RIVET SETS
Cleveland Steel Tool Company, 660 E. 82d Street, Cleveland, Ohio
Keller Pneumatic Tool Company, Grand Haven, Mich.
Rich Tool Company, Railway Exchange Chicago, Ill.
Topping Brothers, 122 Chambers Street New York

RIVETERS
(See Pneumatic Riveters and Power Riveters)

RIVETING MACHINES, HYDRAULIC AND STEAM POWER
(Also see Power Riveters and Pneumatic Riveters)

When writing to advertiser, please mention INTERNATIONAL MARINE ENGINEERING.

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

CHAS. CORY & SON, Inc.

ESTABLISHED 1845

NEW YORK 290 HUDSON STREET MAIN OFFICE & FACTORY
PHILADELPHIA 207 MARKET STREET
SEATTLE 83 COLUMBIA STREET
SAN FRANCISCO 585 MISSION STREET

SHIPS TELEGRAPHS
MARINE LIGHTING FIXTURES
AND
WIRING APPLIANCES

Engine Speed Indicators
Loud Speaking Telephones
Rudder Angle Indicators
Electric Whistle Operators
Boiler Fire Timing Systems
Inter-Communicating Telephones
Oil and Water Level Indicators
Electric Stateroom Heaters
Fire Alarm Systems
Annunciators
Call Bells
Push Buttons
Voice Tubes
Voice Tube Fittings
Mechanical Engine Gongs
Jingle Bells, Pulls,
Sounders, Pulleys, Etc.

Originators and Designers of Fire-Control and Inter-Communicating Systems for Naval Merchant Vessels

Complete Electrical and Mechanical Installations Solicited

Electrical **Mechanical**

Chambersburg Engineering Company, Chambersburg, Pa.
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Niles-Bement-Pond Company, 111 Broadway, New York

ROD AND YOKE ENDS
Williams & Co., J. H., 63 Richards St., Brooklyn, N. Y.

RODS (BRASS)
Bridgeport Brass Co., Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

RODS (STEEL)
General Steel Company, Public Service Building, Milwaukee, Wis.
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.
Page Steel & Wire Company, 30 Church Street, New York

RODS, WELDING
(See Welding Rods)

ROLL AND PITCH RECORDERS
Sperry Gyroscope Company, Brooklyn, New York

ROLLED ZINC
New Jersey Zinc Company, 160 Front Street, New York
Williams, Wm. E., 62 Front Street, New York

ROLLER BEARINGS
Bantam Ball Bearing Company, Bantam, Conn.
Gwilliam Company, The, 253 West 58th Street, New York

ROLLS, BENDING AND STRAIGHTENING
Camden Forge Company, Camden, N. J.
Cleveland Punch & Shear Works Company, Cleveland, Ohio
Heppenstall Forge & Knife Co., Pittsburgh, Pa.
Niles-Bement-Pond Company, 111 Broadway, New York

ROOFING, FIREPROOF
Texas Company, The, 17 Battery Place, New York

ROOFING PAINTS
Dixon, Joseph, Crucible Company, Jersey City, N. J.
Ferdinand, L. W., & Company, 152 Kneeland Street, Boston, Mass.
International Compositions Company, 18 Broadway, New York

ROPE
(Also see Wire Rope)
American Manufacturing Company, Noble & West Sts., Brooklyn, N. Y.
Broderick & Bascom Rope Company, 805 No. Main Street, St. Louis, Mo.
Columbian Rope Company, Auburn, N. Y.
Durable Wire Rope Company, 93 Pearl Street, Boston, Mass.
Granger, George B., & Company, 66 Broadway, New York
McNab Company, The, Bridgeport, Conn.
Moon Company, George C., Garwood, N. J.
Plymouth Cordage Company, North Plymouth, Mass.
Samson Cordage Works, Boston, Mass.
Upson-Walton Company, 280 Broadway, New York
Waterbury Company, 63 Park Row, New York
Whitlock Cordage Company, 46 South Street, New York

ROPE TRANSMISSION
American Manufacturing Company, Noble & West Streets, Brooklyn, N. Y.
Broderick & Bascom Rope Company, 805 No. Main Street, St. Louis, Mo.
Columbian Rope Company, Auburn, N. Y.
Whitlock Cordage Company, 46 South Street, New York

ROTARY BLOWERS
(See Blowers)

ROTATING PLUNGER PUMPS
Kinney Manufacturing Company, Boston, Mass.

ROTARY PUMPS
Blackmer Rotary Pump Company, Book Building, Detroit, Mich.
Kinney Manufacturing Company, Boston, Mass.
Sands, A. B., & Son, Company, 22 Vesey Street, New York

ROTARY SHEARS
Quickwork Company, The, St. Marys, Ohio

ROWBOATS
(See Launches and Yachts)

ROWLOCKS
Malleable Iron Fittings Co., Brantford, Conn.

RUBBER CEMENT TANKS AND PUMPS
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

RUBBER GOODS
(Also see Packing; also see Interlocking Rubber Tiling)
Goodyear Tire & Rubber Co., Akron, Ohio
United States Rubber Company, 1790 Broadway, New York
Williams, Wm. E., 62 Front Street, New York

RUBBER TILING
(See Interlocking Rubber Tiling)

RUDDER POSTS
Hardie-Tynes Manufacturing Company, Birmingham, Ala.
Pacific Construction & Engineering Co., 2917 Whatcom Ave., Seattle, Wash.
Penn Seaboard Steel Corporation, Franklin Bank Bldg., Philadelphia, Pa.

RUDDERS
Penn Seaboard Steel Corp., Franklin Bank Building, Philadelphia, Pa.

RUST CLEANING DEVICE
Rotary Scraper Company, 17 Battery Place, New York

SAFETY DEVICES
(See Life Saving Devices)

SAFETY SET SCREWS
(See Set Screws)

SAFETY VALVES
(See Valves)

SANITARY FITTINGS
(See Plumbing)

SANITARY PUMPS
Davidson Company, M. T., 154 Nassau Street, New York
Dean Bros. Steam Pump Works, Indianapolis, Ind.
Epping Carpenter Pump Company, Pittsburgh, Pa.
Morris Machine Works, Baldwinsville, N. Y.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Worthington Pump & Machinery Corporation, 115 Broadway, New York

SCALES—ALL KINDS
Fairbanks, Morse & Company, Chicago, Ill.

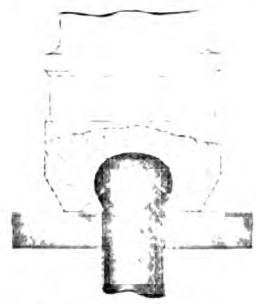
SCARPHING MACHINES
Skinner & Eddy Corporation, Seattle, Wash.

SCREW CUTTING TOOLS AND GAUGES
Greenfield Tap & Die Corporation, Greenfield, Mass.
Pratt & Whitney Company, 111 Broadway, New York

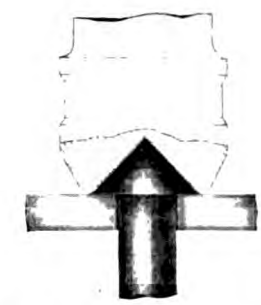
Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

TIGHT SHIP RIVETS

One head of an American Rivet is partly formed in manufacture.
It is finished in the driving.
This insures an absolutely tight rivet.
And the hole is filled at BOTH ENDS.



Both ends are tight on an American rivet. On the partly formed head the metal flows into the hole and over the sheet during driving.



With an ordinary rivet with the head already formed the metal can only squeeze out on the sheet. The hole is never filled.

American Flexible Bolt Company

50 Church Street
New York
Montreal

McCormick Bldg.
Chicago
Winnipeg

Union Bank Bldg.
Pittsburgh, Pa.
Cleveland

SCREW HOLES
Stine Screw Holes Company, Waterbury, Conn.

SCREW PLATES
Morse Twist Drill & Machine Co., New Bedford, Mass.
Williams, Wm. E., 62 Front Street, New York

SCREW PUNCHES
Cleveland Punch & Shear Works Company, Cleveland, Ohio

SEAMLESS STEEL TUBES
National Tube Company, Frick Building, Pittsburgh, Pa.

SEARCHLIGHTS
Benjamin Electric Mfg. Company, Chicago, Ill.
Crouse-Hinds Company, Syracuse, N. Y.
General Electric Company Schenectady, N. Y.
Engberg's Electric & Mechanical Works, St. Joseph, Mich.
Sperry Gyroscope Company, Brooklyn, N. Y.
Western Electric Company, 151 Fifth Avenue, New York

SELF MEASURING PUMPS FOR OIL AND GASOLINE
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

SENSITIZING MACHINERY, BLUE PRINT PAPER
Pease Company, C. F., 230 Institute Place, Chicago, Ill.

SENTINEL VALVES
(See Valves)

SHACKLES
Admiral Anchor Co., Franklin Bank Bldg., Philadelphia, Pa.

SHAFT STEEL
(See Steel Shafting)

SHAFTING
(Hollow Seamless Steel)
Camden Forge Company, Camden, N. J.
Hardie-Tynes Manufacturing Company, Birmingham, Ala.
Heppenstall Forge & Knife Company, Pittsburgh, Pa.
Kearfott Engineering Company, 95 Liberty Street, New York
Morse Dry Dock & Repair Co., Brooklyn, N. Y.
National Tube Company, Frick Building, Pittsburgh, Pa.
Williams, Wm. E., 62 Front Street, New York

SHAFTING—BRONZE
American Manganese Bronze Company, Holmesburg, Philadelphia, Pa.

SHEARING MACHINES
(See Power Shears)

SHEARS
(See Power Shears)

SHEAVES
Williams, Wm. E., 62 Front Street, New York

SHEET RUBBER TILING
United States Rubber Company, 1790 Broadway, New York

SHIPBUILDERS AND DRY DOCK COMPANIES
American Balsa Company, 50 E. 42d Street, New York
Ames Shipbuilding & Dry Dock Co., Hoge Bldg., Seattle, Wash.
Atlantic Corporation, The, 77 Franklin Street, Boston, Mass.
Baltimore Dry Docks & Shipbuilding Company, Baltimore, Md.
Bethlehem Shipbuilding Corporation, Bethlehem, Pa.
Consolidated Shipbuilding Corporation, Morris Heights, New York
Cramp, Wm. & Sons, Ship & Engine Bldg. Co., Richmond & Norris Sts., Philadelphia, Pa.
Davis & Son, M. M., Inc., 366 Fifth Avenue, New York
Fletcher, W. & A., Company, Hoboken, N. J.
Foundation Company, The, 233 Broadway, New York
Great Lakes Engineering Works, Detroit, Mich.
Howard Shipyards & Dock Co., Jeffersonville, Ind.
Imperial Shipbuilding Corporation, Detroit, Mich.
Johnson Iron Works, Ltd., New Orleans, La.
McDougall-Duluth Company, Duluth, Minn.
Manitowoc Shipbuilding Company, Manitowoc, Wis.
Merchant Shipbuilding Corp., Chester, Pa.
Morse Dry Dock & Repair Co., Brooklyn, N. Y.
Newburgh Shipyards, Inc., Newburgh, N. Y.
Newport News Shipbuilding & Dry Dock Co., Newport News, Va.
New London Ship & Engine Company, Groton, Conn.
Northwest Engineering Works, Green Bay Wis.
Peninsula Shipbuilding Company, Portland Oregon
Saginaw Shipbuilding Company, Saginaw Mich.
Skinner & Eddy Corporation, Seattle Wash.
Standard Motor Construction Co., 12" Pine Street, Jersey City, N. J.
Todd Shipyards Corporation, 15 Whitehall Street, New York
Union Dry Dock & Repair Company, Weehawken, N. J.
Valk & Murdoch Co., Charleston, S. C.
Vulcan Iron Works, Inc., Foot of Morris St., Jersey City, N. J.
Ward, Chas., Engineering Works, Charleston, W. Va.

SHIPBUILDING CRANES
(See Cranes)

SHIP BROKERS
Bogert, John L., 165 Broadway, New York
Brenzinger, A. H., 41 Union Square New York
Cox & Stevens, 15 William Street, New York
Ferris, Theodore, 30 Church Street, New York
Haight, Robert S., 17 State Street, New York
Harris, Leonard B., Woolworth Building, New York
Hough, Edward S., 16 California Street, San Francisco, Calif.
Johnson, Arthur F., 535 Cass Street, Milwaukee, Wis.
McClelland, N. E., & Company, Inc., 1 Stone Street, New York

SHIP CHANDLERS
Williams, Wm. E., 62 Front Street, New York

SHIP CLOCKS
(See Clocks)

SHIP COMPOSITIONS
American Bitumastic Enamels Company, 17 Battery Place, New York
International Compositions Company, 18 Broadway, New York

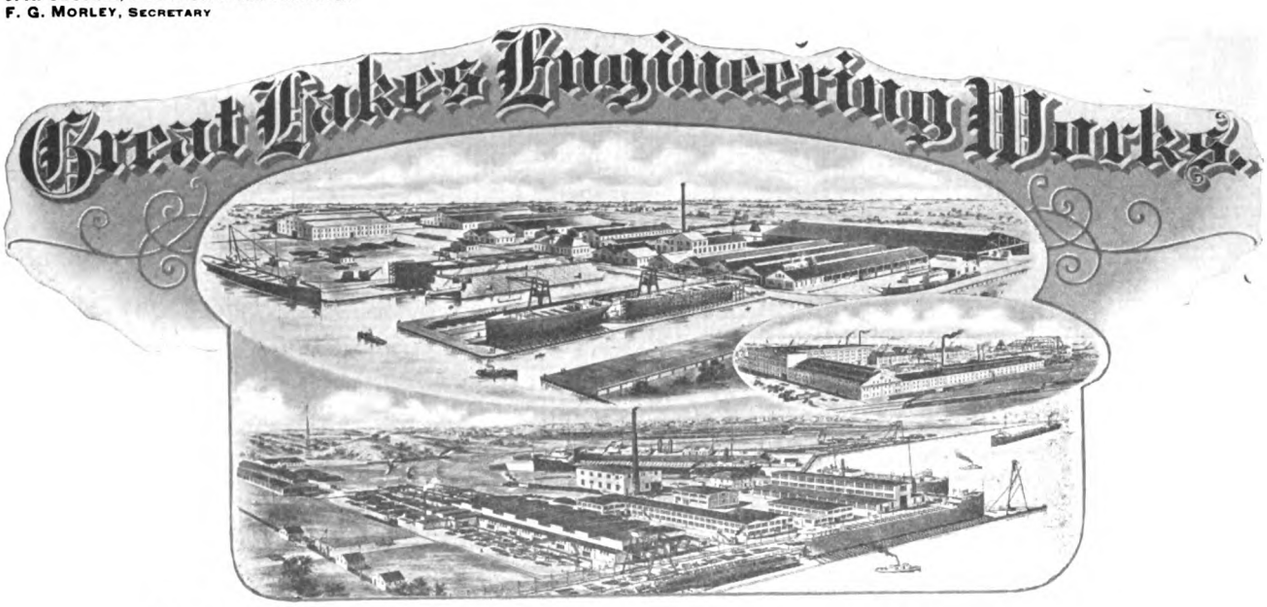
SHIP COWLS
(See Cowls)

SHIP FITTINGS, SUPPLIES AND EQUIPMENT
Ferdinand, L. W., & Co., 152 Kneeland Street, Boston, Mass.
Griscom-Russell Company, 90 West Street, New York

Generated on 2024-09-12 08:24 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

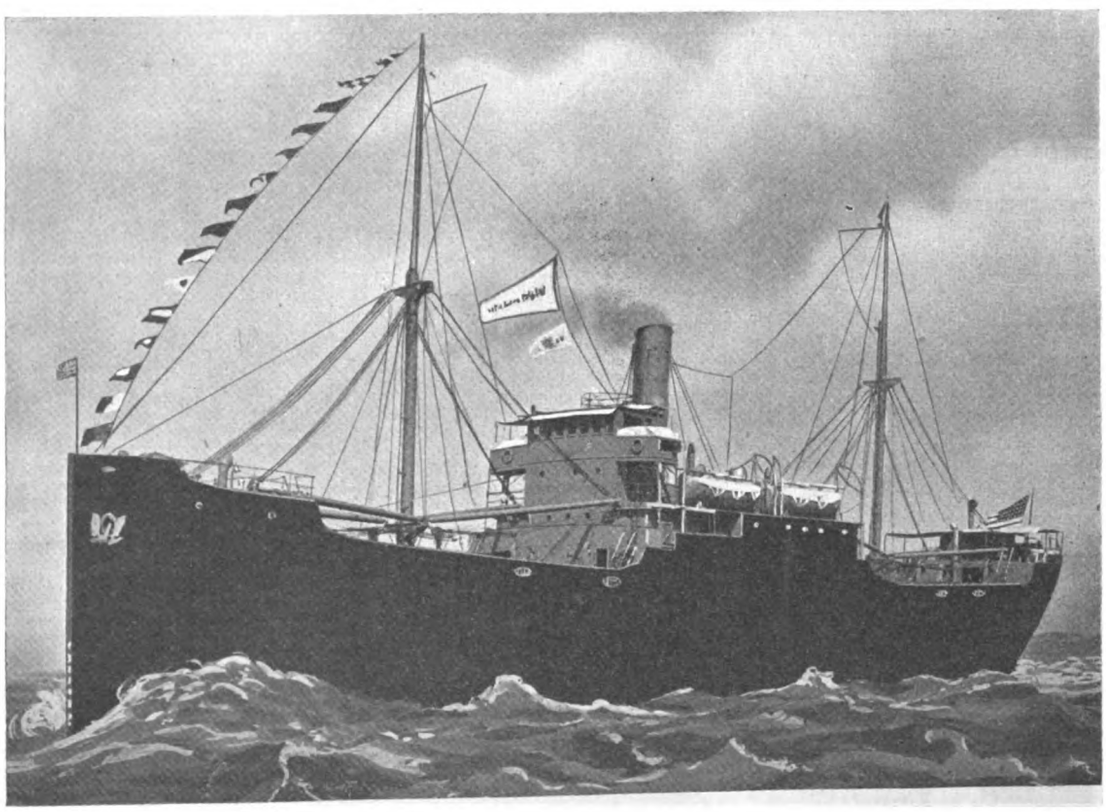
ANTONIO C. PESSANO, CHAIRMAN OF BOARD
JOHN R. RUSSEL, PRESIDENT
H. W. HOYT, VICE-PRESIDENT & TREASURER
J. A. UBSDELL, VICE-PRES. & GEN'L MANAGER
F. G. MORLEY, SECRETARY

Great Lakes Engineering Works.



Steel Ship and Engine Builders

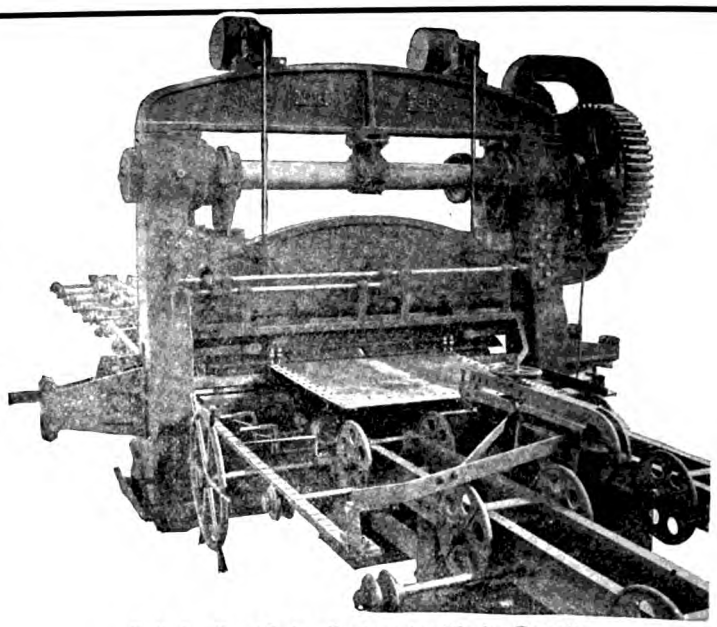
Detroit, Michigan, U. S. A.



Ships of above type built by us are now employed in the over sea trade to all parts of the World—There is a splendid record behind each ship.

Generated on 2024-09-12 08:30 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

"Universal" Type Multiple Punch and Hand-Operated Spacing Table



"Thomas" Tools are Time Savers

Built for Great Lakes Engineering Works, Detroit

(Send for Bulletin 108 MA)

Thomas Spacing Machine Co.

Fulton Building Cable Address: "Thomaspace," Pittsburgh **Pittsburgh, Pa., U.S.A.**

Builders of Thomas Spacing Tables and Multiple Punches, One-Man Roll Tables, Pantograph Punching Tables, Angle Planers, Angle Bevelers, and Standard Line of Punching and Shearing Machinery.

Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

SHIP GLUE
(See Marine Glue)

SHIP GRATINGS
Irving Iron Works Company, Long Island City, New York

SHIP HAMMERS—ELECTRIC
Western Electric Company, 151 Fifth Avenue, New York

SHIP LOCKS AND LATCHES
Tiebout, W. & J., 118 Chambers Street, New York
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

SHIP LOGS AND SPEED INDICATORS
McNab Company, The, Bridgeport, Conn.

SHIP PLATES
(See Steel Plates; also Zinc Ship & Boiler Plates)
New Jersey Zinc Company, 160 Front Street, New York

SHIP RIVETS
(See Rivets)

SHIP STABILIZERS
Sperry Gyroscope Co., Brooklyn, N. Y.

SHIP STORES
(See Chandlery Stores)

SHIP STRAINERS
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

SHIP TELEGRAPHS
Chadburn (Ship) Telegraph Co., Troy, N. Y.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
McNab Company, The, Bridgeport, Conn.

SHIP TELEPHONES
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Klaxon Company, The, Metropolitan Tower, New York
Western Electric Company, 151 Fifth Avenue, New York

SHIP TIMBERS
(See Lumber)

SHIP UPHOLSTERY
Du Pont Fabrikoid Company, Wilmington, Del.

SHIPYARDS
(See Shipbuilders)

SHIPYARD BUILDERS
Monks & Johnson, 99 Chauncy Street, Boston, Mass.

SHIPYARD CRANES
(See Cranes)

SHIPYARDS WHIRLERS
(See Cranes)

SHOP CRANES
(See Cranes)

SHOP EQUIPMENT
American Shop Equipment Company, Hudson Terminal Building, New York

SIGNALLING APPARATUS
Benjamin Electric Manufacturing Company, Chicago, Ill.
Cory, Chas., & Son, Inc., 290 Hudson Street, New York

SKYLIGHT LIFTING GEAR
Tiebout, W. & J., 118 Chambers Street, New York

SLEEVES
(See Sockets and Sleeves)

SLOTTING MACHINES
Niles-Bement-Pond Company, 111 Broadway, New York

SMALL TOOLS
(See Bench Tools)

SMOOTH-ON
Smooth-On Manufacturing Company, 570 Communipaw Ave., Jersey City, N. J.

SOAPS
Texas Company, The, 17 Battery Place, New York
Williams, Wm. E., 62 Front Street, New York

SOCKETS AND SLEEVES
Morse Twist Drill & Machine Co., New Bedford, Mass.
Pratt & Whitney Company, 111 Broadway, New York
Williams & Co., J. H., 63 Richards St., Brooklyn, N. Y.

SOOT BLOWERS
Diamond Power Specialty Company, Detroit, Mich.

SOUNDING MACHINES
Hand, John E., & Son Company, Haddonfield, N. J.
McNab Company, The, Bridgeport, Conn.
Williams, Wm. E., 62 Front Street, New York

SOUTHERN PINE
(See Lumber)

SPACING TABLES WITH MULTIPLE PUNCHES
Norbom Engineering Company, Darby, Pa
Thomas Spacing Machine Company, Fulton Building, Pittsburgh, Pa.

SPECIAL COPPER WORK
Badger, E. B., & Sons Co., 63 Pitts Street, Boston, Mass.
Sands, A. B. & Son 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

SPEED INDICATORS FOR SHIPS
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
McNab Company, The, Bridgeport, Conn.

SPIKES
Galbraith, C. C., & Son, 47 West Street, New York
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

SPRAYING EQUIPMENT
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Spray Engineering Company, Boston, Mass.

SPROCKET RIMS
(See Adjustable Sprocket Rims)

STABILIZERS
Sperry Gyroscope Company, Brooklyn, New York

STAIRS AND STAIR TREADS
Irving Iron Works Company, Long Island City, New York

STAYBOLTS
American Flexible Bolt Company, Union Bank Bldg., Pittsburgh, Pa.

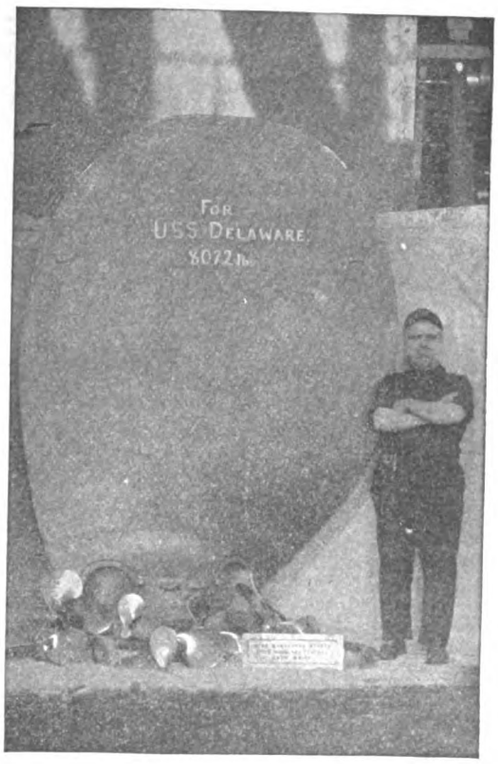
STAYBOLT IRON
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.

STAYBOLT TAPS
(See Taps & Dies)

STEAM ENGINES
(See Engines)

STEAM GAUGES
American Steam Gauge & Valve Mfg Company, Camden Street, Boston, Mass
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.

Generated on 2024-09-12 08:12 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN



HYDE

MANGANESE BRONZE

STANDARD FOR TWENTY YEARS FOR PROPELLERS

SOLID BRONZE PROPELLERS FROM 8 INCHES TO 20 FEET IN DIAMETER

BRONZE BLADES AND HUBS OF ANY SIZE

HYDE WINDLASS COMPANY

BATH, ME.

New York Representative, Kearfott Engineering Co., 95 Liberty Street, New York

Lunkenheimer Company, Cincinnati, Ohio
Powell Company, The William, Cincinnati, Ohio
Taylor Instrument Companies, Rochester, N. Y.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

STEAM HAMMERS
Chambersburg Engineering Company, Chambersburg, Pa.
Niles-Bement-Pond Company, 111 Broadway, New York

STEAM PIPE COVERINGS
(See Non-Conducting Coverings)

STEAM PUMPS
(See Pumps)

STEAM SEPARATORS
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Williams Valve Company, D. T., Cincinnati, Ohio

STEAM SPECIALTIES
(See Pumps, Valves, Gauges, Lubricators, etc.)

STEAM SUPERHEATERS
(See Marine Superheaters)

STEAM TRAPS
American Steam Gauge & Valve Mfg. Company, Camden Street, Boston, Mass.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Mason Regulator Company, Dorchester Centre, Boston, Mass.
Ohio Blower Company, Cleveland, Ohio
Pratt & Cady Company, Inc., Hartford, Conn.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Union Water Meter Company, Worcester, Mass.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

STEAM TURBINES
Alberger Pump & Condenser Company, 140 Cedar Street, New York
Bethlehem Shipbuilding Corporation, Bethlehem, Pa.
Cramp, Wm. & Sons Ship & Engine Bldg. Company, Richmond & Norris Sts., Philadelphia, Pa.
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
Fletcher, W. & A., Company, Hoboken, N. J.
General Electric Company, Schenectady, N. Y.
Hallidie Company, Spokane, Wash.
Howden, James & Company, Wellsville, N. Y.
Kearfott Engineering Company, 95 Liberty Street, New York
Parsons Marine Steam Turbine Company, 2 Rector Street, New York
Steam Motors Company, Springfield, Mass.
Terry Steam Turbine Company, Hartford, Conn.
Vulcan Iron Works, Inc., Foot of Hudson St., Jersey City, N. J.
Western Electric Company, 151 Fifth Avenue, New York
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

STEAM TURBINE DYNAMOS
De Laval Steam Turbine Company, 400 Nottingham Way, Trenton, N. J.
General Electric Company, Schenectady, N. Y.
Steam Motors Company, Springfield, Mass.
Vulcan Iron Works, Inc., Foot of Morris Street, Jersey City, N. J.
Western Electric Company, 151 Fifth Avenue, New York
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

STEEL (FOR SHIPBUILDING PURPOSES)
General Steel Company, Public Service Bldg., Milwaukee, Wis.
Harvey Company, Arthur C., 374 Congress Street, Boston, Mass.

STEEL BALLS
Bantam Ball Bearing Company, Bantam, Conn.
Gwilliam Company, The, 253 West 58th Street, New York

STEEL CASTINGS
(See Castings, Steel)

STEEL MASTS
Great Lakes Engineering Works, Detroit, Mich.

STEEL PIPE
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
National Tube Company, Frick Building, Pittsburgh, Pa.

STEEL PLATES
(See Steel Plates and Shapes)

STEEL PLATE CONSTRUCTION
Heine Safety Boiler Company, 5322 Marcus Avenue, St. Louis, Mo.

STEEL PLATES AND SHAPES
General Steel Company, Public Service Building, Milwaukee, Wis.
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.
Lukens Steel Co., Coatesville, Pa.
Penn Seaboard Steel Corporation, Franklin Bank Bldg., Philadelphia, Pa.

STEEL SHAFTING
(See Shafting)

STEEL TANKS
Heine Safety Boiler Company, 5322 Marcus Avenue, St. Louis, Mo.
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Wayne Oil Tank & Pump Co., 589 Canal Street, Fort Wayne, Ind.

STEERING ENGINES
American Clay Machinery Company, Liberty Building, Philadelphia, Pa.
American Engineering Company, Philadelphia, Pa.
American Shipbuilding Company, Cleveland, Ohio
Dake Engine Company, Grand Haven, Mich.
Great Lakes Engineering Works, Detroit, Mich.
Hyde Windlass Company, Bath, Maine
Kearfott Engineering Company, 95 Liberty Street, New York
Kerr Machinery Corporation, Kerr Building, Detroit, Mich.
Lidgerwood Manufacturing Company, 95 Liberty Street, New York
Mundy Hoisting Engine Company, J. S., Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.
Pacific Machine Shop & Mfg. Co., 7500 Carleton Ave., Seattle, Wash.

STEERING GEARS
American Clay Machinery Co., Liberty Building, Philadelphia, Pa.

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Thor

PNEUMATIC TOOLS

In olden days Thor was popularly supposed to be the God of Thunder. He wore a red beard, and was girded with a belt of great strength; in his hand he swung a mighty hammer with which he subdued the Frost Giants in the Springtime. His chariot was drawn by two goats from whose hoofs and teeth sparks of fire flashed. Many victories over the Giants are credited to Thor. Our ancestors believed that the thunder was the roll of his chariot wheels; the wind, his onward rush; the striking of his hammer, the lightning.

THE SHIPBUILDER

FOR THE SHIPYARDS

The modern Thor of today is known as the Shipbuilder.

He drives rivets with unerring accuracy and with great speed; he chips, caulks, scales and cleans; does tank testing, drills holes in steel and wood; drives drift bolts and stay bolts and engages in numerous activities which enables the progressive Shipbuilder to turn out his completed ships on scheduled time.

The Thor booklet shows many ways in which Thor tools may be used in shipbuilding. Send for it.

INDEPENDENT PNEUMATIC TOOL COMPANY

Chicago New York Pittsburgh Cleveland Detroit San Francisco Birmingham Montreal

American Engineering Company, Philadelphia, Pa.
Dake Engine Company, Grand Haven, Mich.
Howden, James & Company, Wellsville, N. Y.
Hyde Windlass Company, Bath, Maine
Kerr Machinery Corporation, Kerr Building, Detroit, Mich.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McNab Company, The, Bridgeport, Conn.
Maine Electric Co., Portland, Me.
Mundy Hoisting Engine Company, J. S., Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.

STEERING WHEELS
American Clay Machinery Company, Liberty Building, Philadelphia, Pa.
American Engineering Company, Philadelphia, Pa.
Dake Engine Company, Grand Haven, Mich.
Hand, John E., & Sons Company, Haddonfield, N. J.
Hyde Windlass Company, Bath, Maine
McNab Company, The, Bridgeport, Conn.

STEMS
Penn Seaboard Steel Corp., Franklin Bank Building, Philadelphia, Pa.

STEPS—SAFETY GRATING
Irving Iron Works Company, Long Island City, New York
Universal Safety Tread Company, 40 Court Street, Boston, Mass.

STERN FRAMES AND TUBES
Hardie-Tynes Manufacturing Company, Birmingham, Ala.
Pacific Construction & Engineering Company, 2917 Whatcom Ave., Seattle, Wash.
Penn Seaboard Steel Corporation, Franklin Bank Bldg., Philadelphia, Pa.

STOP COCKS
(See Valves)

STOVES
(See Ranges)

STRAIGHTENING ROLLS
(See Rolls)

SUPERHEATERS
(See Marine Superheaters)

SUPERHEATER TUBES
National Tube Company, Frick Building, Pittsburgh, Pa.

SULPHURIC ACID
New Jersey Zinc Company, 160 Front Street, New York

SURFACE CONDENSERS
Davidson Company, M. T., 154 Nassau Street, New York
Ross Heater & Mfg. Co., Buffalo, N. Y.
Wheeler Manufacturing Company, C. H., Philadelphia, Pa.
Williams, Wm. E., 62 Front Street, New York

SURVEYING INSTRUMENTS
Hand, John E., & Sons Company, Haddonfield, N. J.
New York Blue Print Paper Company, 102 Reade Street, New York
Pease Company, C. F., 230 Institute Place, Chicago, Ill.

SWIVELS—HOOKS
Williams & Co., J. H., 63 Richards St., Brooklyn, N. Y.

SWITCHES AND SWITCHBOARDS
(See Electrical Appliances)

TACHOMETERS
(See Electric Tachometers)

TACKLE BLOCKS
Marine Decking & Supply Co., 1011 Chestnut Street, Philadelphia, Pa.
Topping Brothers, 122 Chambers Street, New York
Williams, Wm. E., 62 Front Street, New York

TAIL SHAFTS
(See Shafting)

TANKS
(Copper, Galvanized Iron)
Fairbanks, Morse & Company, 900 South Wabash Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Richardson-Phenix Company 120 Reservoir Avenue, Milwaukee, Wis.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Stevens-Aylsworth Co., Inc., 253 Broadway, New York
Wayne Oil Tank & Pump Co., 589 Canal Street, Fort Wayne, Ind.

TANKS FOR OIL, GASOLINE, KEROSENE, ETC.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

TANK GAUGES
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

TANK SHIPS
Baltimore Dry Docks & Shipbuilding Co Baltimore, Md.
Merchant Shipbuilding Corp., Chester Pa
Newport News Shipbuilding & Drydock Company, Newport News, Va.

TANK PUMPS
Davidson Company, M. T., 154 Nassau Street, New York

TANKS, SEAMLESS STEEL
Continental Iron Works, The, West & Calyer Sts., Brooklyn, New York
National Tube Company, Frick Building Pittsburgh, Pa.

TANKS, WELDED STEEL
Continental Iron Works The, West & Calyer Sts., Brooklyn, New York
Stevens-Aylsworth Co., Inc., 253 Broadway, New York

TAPERED LINERS
Irving Iron Works Company, Long Island City, New York

TAPS AND DIES
Brubaker, W. L., & Bros., 50 Church Street, New York
Greenfield Tap & Die Corporation, Greenfield, Mass.
Pratt & Whitney Co., 111 Broadway New York
Standard Tool Company, Cleveland O
Whitman & Barnes Manufacturing Company, Akron, Ohio
Williams, Wm. E., 62 Front Street, New Y

TARRED HEMP ROPE
Whitlock Cordage Company, 46 Sec Street, New York
Williams, Wm. E., 62 Front Street, New Y

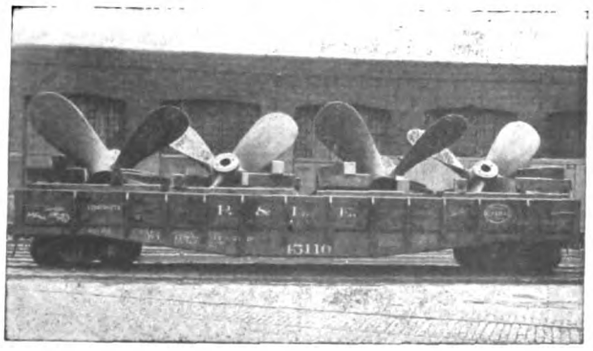
TEES
General Steel Company, Public Serv Building, Milwaukee, Wis.
Harvey, Arthur C., Company, 374 Co gress Street, Boston, Mass.

TELEGRAPH APPARATUS AND TELE GRAPHS—MECHANICAL
(See Mechanical Telegraphs)

TELEGRAPH FITTINGS, CHAIN AND WIRE
Cory, Chas., & Son, Inc., 290 Hudso Street, New York
McNab Company, The, Bridgeport, Conn

Generated on 2024-09-12 09:01 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

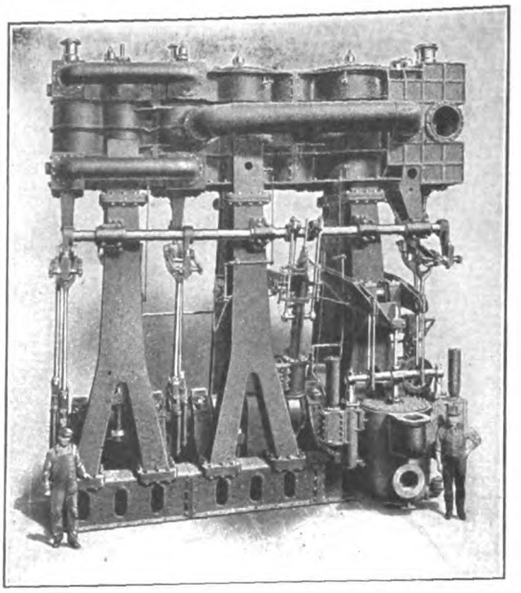
PROPELLERS



A Typical Load of 17′ Diameter Propellers

SOLID AND SECTIONAL
SEMI-STEEL
and
MANGANESE BRONZE

MARINE ENGINES



Triple Expansion 26½″ and 44″ and 74 by 51″ stroke
One of 12 such engines made by us

H. G. TROUT COMPANY

BUFFALO, N. Y. U. S. A.

TELEGRAPH FITTINGS AND VOICE TUBES AND FITTINGS
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Tiebout, W. & J., 118 Chambers Street, New York

TELEMOTORS—ELECTRIC AND HYDRAULIC
American Engineering Company, Philadelphia, Pa.
Hyde Windlass Company, Bath, Maine
Pacific Machine Shop & Mfg. Co., 7500 Carleton Ave., Seattle, Wash.

TELEPHONES AND TELEPHONE APPARATUS
(Also see Ship Telephones)
Marconi Wireless Telegraph Co. of America, Woolworth Building, New York
Western Electric Company, 151 Fifth Avenue, New York

THERMOMETERS
Hand, John E., & Sons Company, Haddonfield, N. J.
Taylor Instrument Companies, Rochester, N. Y.
Williams, Wm. E., 62 Front Street, New York

THERMIT WELDING
Metal & Thermit Corporation, 120 Broadway, New York
Powell Company, The William, Cincinnati, Ohio
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.

THRUST BEARINGS
(See Ball Bearings and Roller Bearings)
Gwilliam Company, The, 253 West 58th Street, New York
Kingsbury, Albert, Pittsburgh, Pa.

TILING
(See Interlocking Rubber Tiling)

TOOLS
(See Bench Tools)

TOOL STEEL
Cleveland Steel Tool Company, 660 E. 82d Street, Cleveland, Ohio
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.

TOOLS, MACHINE
(See Machine Tools)

TOOL HOLDERS
Williams & Co., J. H., 63 Richards Street, Brooklyn, New York

TORSION METERS
McNab Company, The, Bridgeport, Conn.

TOWER CRANES
Dravo-Doyle Company, Pittsburgh, Pa.
Maine Electric Co., Portland, Me.

TOWING HOOKS AND COCKS
American Engineering Company, Philadelphia, Pa.

TOWING LINES
(See Rope and Wire Rope)

TOWING MACHINES
American Engineering Company, Philadelphia, Pa.
Dake Engine Company, Grand Haven, Mich.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York

TRACING CLOTH
National Tracing Cloth Co., Saylesville, R. I.
Spaulding-Moss Co., 34 Federal St., Boston, Mass.

TRANSMISSION ROPE
(See Rope)

TRAPS
(See Steam Traps)

TRAVELING CRANES
(See Cranes)

TROLLEY AND TRACK SYSTEMS
Brown Hoisting Machinery Company, Cleveland, Ohio
McMyler Interstate Company, Bedford, Ohio
Gwilliam Company, The, 253 West 58th Street, New York

TRUCKS
Mutual Truck Co., Sullivan, Ind.

TUBES
(See Boiler Tubes; also Condenser Tubes)

TUBES, RODS, WIRES
(Copper, Brass and Bronze)
International Nickel Co., 43 Exchange Place, New York
Standard Underground Cable Company, Pittsburgh, Pa.
Williams, Wm. E., 62 Front Street, New York

TUBE CLEANERS
(See Boiler Flue Cleaners)

TUBE EXPANDERS
(See Boiler Flue Expanders)

TUGS
(See Shipbuilders)

TURBINES
(See Steam Turbines)

TURNBUCKLES AND OTHER WIRE ROPE ACCESSORIES
American Engineering Company, Philadelphia, Pa.
Broderick & Bascom Rope Company, 805 North Main Street, St. Louis, Mo.
Durable Wire Rope Company, 93 Pearl Street, Boston, Mass.
Moon Company, George C., Garwood, N. J.
Topping Brothers, 122 Chambers Street, New York
Waterbury Company, 63 Park Row, New York
Williams & Company, J. H., 63 Richards Street, Brooklyn, New York
Williams, Wm. E., 62 Front Street, New York

TURNING ENGINES
American Engineering Company, Philadelphia, Pa.

TURRET LATHES
(See Lathes, Turret)

TWINE
(See Rope; also Cordage)
American Manufacturing Company, Noble & West Sts., Brooklyn, New York
Columbian Rope Company, Auburn, N. Y.
Plymouth Cordage Company, North Plymouth, Mass.
Samson Cordage Works, Boston, Mass.
Waterbury Company, 63 Park Row, New York
Whitlock Cordage Company, 46 South Street, New York
Williams, Wm. E., 62 Front Street, New York

TWIST DRILLS
Morse Twist Drill & Machine Company, New Bedford, Mass.
Pratt & Whitney Company, 111 Broadway, New York
Rich Tool Company, Railway Exchange, Chicago, Ill.
Standard Tool Company, Cleveland, Ohio
Whitman & Barnes Manufacturing Company, Akron, Ohio
Williams, Wm. E., 62 Front Street, New York

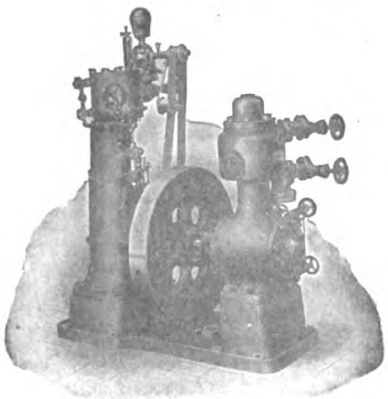
UNDERGROUND TANKS
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

UNIONS
(See Pipe Unions)

UPHOLSTERY
(See Ship Upholstery)

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Refrigerating Machinery



Following the { Ammonia Compression / Ammonia Absorption / CO_2 Compression } Principles

A Machine to meet every Refrigerating Requirement.

In Capacities ranging from 1-8-ton refrigerating duty upwards.

Actuated by any available source of power.

Your Refrigerating Machinery Requirements can best be supplied by the Largest Manufacturers of this class of machinery in the world.

Consultation on any Refrigerating Problem invited.

YORK MANUFACTURING COMPANY

(Ice-Making and Refrigerating Machinery exclusively)

YORK, PA.

VACUUM GAUGES
(See Steam Gauges)

VACUUM PUMPS
Dean Bros. Steam Pump Works, Indianapolis, Ind.
Ingersoll-Rand Company, 11 Broadway, New York
Ross Heater & Mfg. Co., Buffalo, N. Y.
Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.
Wheeler Manufacturing Co., C. H., Philadelphia, Pa.
Worthington Pump & Machinery Corporation, 115 Broadway, New York

VACUUM TRAPS
Crane Company, The, 836 So. Michigan Avenue, Chicago, Ill.
Griscom-Russell Company, 90 West Street, New York
Williams Valve Company, D. T., Cincinnati, Ohio

VALVE STEMS
Pacific Construction & Engineering Co., 2917 Whatcom Ave., Seattle, Wash.

VALVES
American Steam Gauge & Valve Mfg. Company, Camden Street, Boston, Mass.
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Dew Valve Company, 149 Broadway, New York
Goodyear Tire & Rubber Company, Akron, Ohio
Griscom-Russell Company, 90 West Street, New York
Jerguson Valve Mfg. Company, Winter Hill, Somerville, Mass.
Kennedy Valve Mfg. Company, Elmira, N. Y.
Lunkenheimer Company, Cincinnati, Ohio
Manning, Maxwell & Moore, Inc., 119 West 40th Street, New York
Mason Regulator Company, Dorchester, Centre, Boston, Mass.
Powell Company, The William, Cincinnati, Ohio
Pratt & Cady Company, Inc., Hartford, Conn.
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Union Water Meter Company, Worcester, Mass.
Watson-Stillman Company, 50 Church Street, New York
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

VALVES, AMMONIA AND CARBON DIOXIDE
Frick Company, Waynesboro, Pa.
Kroeschell Bros. Ice Machine Company, 472 W. Erie Street, Chicago, Ill.
York Manufacturing Company, York, Pa.

VALVES—CHRONOMETER
(See Chronometer Valves)

VALVES—RUBBER
Powell Company, The William, Cincinnati, Ohio
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Sands, A. B., & Son Company, 22 Vesey Street, New York
Williams, Wm. E., 62 Front Street, New York

VALVES—WATER
Chambersburg Engineering Company, Chambersburg, Pa.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Jerguson Gage & Valve Company, Winter Hill, Somerville, Mass.
Lunkenheimer Company, Cincinnati, Ohio
Mason Regulator Company, Dorchester Centre, Boston, Mass.
Powell Company, The William, Cincinnati, Ohio
Sands, A. B., & Son Company, 22 Vesey Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Union Water Meter Company, Worcester, Mass.
Williams Valve Company, D. T., Cincinnati, Ohio
Williams, Wm. E., 62 Front Street, New York

VAPOR PROOF FITTINGS
(See Waterproof Fittings)

VENTILATING FANS
(See Blowers)

VENTILATORS
McNab Company, The, Bridgeport, Conn
Ohio Blower Company, Cleveland, Ohio
Sands, A. B., & Son Company, 22 Vesey Street, New York
Schutte & Koerting Company, 1158 Thompson Street, Philadelphia, Pa.
Thacher Propeller & Foundry Corporation Albany, N. Y.

VERTICAL PUMPS
(See Pumps)

VESSEL BROKERS
(See Ship Brokers)

VISES—CHAIN PIPE, CLAMP, MOUNT
Topping Brothers, 122 Chambers Street New York
Williams & Co., J. H., 63 Richards Street Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

VOICE TUBES AND FITTINGS
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Rostand Manufacturing Company, Milford Conn.

VOLTMETERS
(See Electrical Instruments)

WALKWAY GRATINGS
Irving Iron Works Company, Long Island City, New York

WALL RADIAL DRILLS
(See Radial Drills)

WATER CLOSETS, MARINE
(See Plumbing)

WATER COLUMNS
Crane Company, 836 So. Michigan Avenue Chicago, Ill.
Jerguson Gage & Valve Company, Winter Hill, Somerville, Mass.
Lunkenheimer Company, Cincinnati, Ohio
National Tube Company, Frick Building Pittsburgh, Pa.

WATER GAUGES AND ALARMS
Cory, Chas., & Son, 290 Hudson Street New York
Crane Company, 836 So. Michigan Avenue Chicago, Ill.
Jerguson Gage & Valve Company Winter Hill, Somerville, Mass.
Lunkenheimer Company, Cincinnati Ohio

Generated on 2024-09-12 09:00 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Anchors—Stud Link Chain—Forgings

Baldt Stockless Anchors
Old Style Anchors
Trotman Anchors
Fishing Type Anchors

Stud Link Chain
Shackles

Drop Forgings
Heavy Forgings

Baldt Anchor Company

Office and Works: Chester, Pa.

Powell Company, The William, Cincinnati, Ohio
Richardson-Phenix Company, 120 Reservoir Avenue, Milwaukee, Wis.
Williams Valve Company, D. T., Cincinnati, Ohio

WATER METERS
Union Water Meter Company, Worcester, Mass.

WATER VALVES
(See Valves, Water)

WATERPROOF LIQUID CEMENT
Ferdinand, L. W., & Company, 152 Kneeland Street, Boston, Mass.

WATERPROOF LIQUID GLUE
Ferdinand, L. W., & Company, 152 Kneeland Street, Boston, Mass.

WATERPROOF PAINT
Dixon, Joseph, Crucible Company, Jersey City, N. J.
International Compositions Company, 18 Broadway, New York

WATERTUBE BOILERS
(See Boilers)
Almy Watertube Boiler Company, Providence, R. I.
Heine Safety Boiler Company, 5322 Marcus Avenue, St. Louis, Mo.
Ward Engineering Works, Chas., Charleston, W. Va.

WATTMETERS
(See Electrical Instruments)

WELDING AND CUTTING APPARATUS AND SUPPLIES
(Oxy-acetylene Process)
Camden Forge Company, Camden, N. J.
General Welding & Equipment Company, 107 Massachusetts Avenue, Boston, Mass.
Metal & Thermit Corporation, 120 Broadway, New York
Oxweld Acetylene Company, Newark, N. J.
Page Steel & Wire Company, 30 Church Street, New York
Prest-O-Lite Company, Inc., 30 East 42nd Street, New York
Vulcan Iron Works, Inc., Foot of Hudson Street, Jersey City, N. J.
Wilson Welder & Metals Company, 10 Rector Street, New York

WELDING, ELECTRIC
General Electric Company, Schenectady, N. Y.
Morse Dry Dock & Repair Co., Brooklyn, N. Y.
Thomson Electric Welding Company, Lynn, Mass.
Thomson Spot Welder Company, Lynn, Mass.
Vulcan Iron Works, Inc., Foot of Hudson Street, Jersey City, N. J.
Wilson Welder & Metals Company, 10 Rector Street, New York

WELDING METALS
(See Welding and Cutting Apparatus and Supplies)

WELDING, PLASTIC ARC
Wilson Welder & Metals Company, 10 Rector Street, New York

WELDING, REPAIRS
Cramp, Wm. & Sons Ship & Engine Building Co., Richmond & Norris Streets, Phildelphia, Pa.
General Welding & Equipment Company, 107 Massachusetts Avenue, Boston, Mass.
Metal & Thermit Corporation, 120 Broadway, New York
Wilson Welder & Metals Company, 10 Rector Street, New York

WELDING RODS OF ALL KINDS
Camden Forge Company, Camden, N. J.
Metal & Thermit Corporation, 120 Broadway, New York
Oxweld Acetylene Company, Newark, N. J.
Page Steel & Wire Company, 30 Church Street, New York
Prest-O-Lite Company, Inc., 30 East 42nd Street, New York
Vulcan Iron Works, Inc., Foot of Hudson Street, Jersey City, N. J.
Wilson Welder & Metals Company, 10 Rector Street, New York

WELDING WIRE
Cramp, Wm., & Sons Ship & Engine Building Company, Richmond & Norris Streets, Philadelphia, Pa.
General Welding & Equipment Company, 107 Massachusetts Avenue, Boston, Mass.
Harvey, Arthur C., Company, 374 Congress Street, Boston, Mass.
Page Steel & Wire Company, 30 Church Street, New York

WHARF CRANES
(See Cranes)

WHARF DROPS
American Engineering Company, Philadelphia, Pa.
Central Foundry Company, 90 West Street, New York

WHEEL TANKS FOR LUBRICATING OIL AND GASOLINE
Wayne Oil Tank & Pump Company, 589 Canal Street, Fort Wayne, Ind.

WHISTLES
American Steam Gauge & Valve Mfg. Co., Camden Street, Boston, Mass.
Ashton Valve Company, 171 First Street, Cambridge, Mass.
Crane Company, 836 So. Michigan Avenue, Chicago, Ill.
Lunkenheimer Company, Cincinnati, Ohio
McNab Company, The, Bridgeport, Conn.
Powell Company, The William, Cincinnati, Ohio
Sands, A. B., & Son Company, 22 Vesey Street, New York
Union Water Meter Company, Worcester, Mass.
Williams, Wm. E., 62 Front Street, New York

WHISTLE CONTROL
Cory, Chas., & Son, Inc., 290 Hudson Street, New York
Lunkenheimer Company, Cincinnati, Ohio
McNab Company The, Bridgeport, Conn.

WINCHES
(See Windlasses)

WINDLASSES
American Clay Machinery Company, Liberty Building, Philadelphia, Pa.
American Engineering Company, Philadelphia, Pa.
American Shipbuilding Company, Cleveland, Ohio
Bethlehem Shipbuilding Corporation, Bethlehem, Pa.
Central Foundry Company, 90 West Street, New York

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

To Secure Economy the Best Auxiliaries are Necessary. Avoid Imitations

HOWDEN'S

PATENT FORCED DRAUGHT SYSTEM
PATENT FURNACE FRONTS
FANS & ENGINES
RETARDERS
CENTRIFUGAL PUMPS
LIGHTING SETS

ARE THE BEST

Branch Offices:—
30 Church St., New York
Portland, Oregon
Montreal, Canada

James Howden & Co. of America, Inc.
WELLSVILLE, N. Y.

Dake Engine Company, Grand Haven, Mich.
Flory, S., Manufacturing Company, Bangor, Pa.
Great Lakes Engineering Works, Detroit, Mich.
Hyde Mindlass Company, Bath, Maine
Kearfott Engineering Company, 95 Liberty Street, New York
Kerr Machinery Corporation, Kerr Building, Detroit, Mich.
Lidgerwood Manufacturing Company, 96 Liberty Street, New York
McNab Company, The, Bridgeport, Conn.
Morse Dry Dock & Repair Co., Brooklyn, N. Y.
Mundy, J. S., Hoisting Engine Company, Newark, N. J.
National Hoisting Engine Company, Harrison, N. J.
Rostand Manufacturing Company, Milford, Conn.

WIRE (FOR ALL ELECTRICAL PURPOSES)
Benjamin Electric Manufacturing Company, Chicago, Ill.
Bryant Electric Company, Bridgeport, Conn.
Page Steel & Wire Company, 30 Church Street, New York
Standard Underground Cable Company, Pittsburgh, Pa.

WIRE FENCES
Page Steel & Wire Company, 30 Church Street, New York

WIRE ROPE, CABLES AND ACCESSORIES
American Engineering Company, Philadelphia, Pa.
Broderick & Bascom Rope Company, 805 No. Main Street, St. Louis, Mo.
Durable Wire Rope Company, 93 Pearl Street, Boston, Mass.
Granger, George B., Company, 66 Broadway, New York
Gwilliam Company, The, 253 West 58th Street, New York
McNab Company, The, Bridgeport, Conn.
Moon Company, George C., Garwood, N. J.
Upson-Walton Company, 280 Broadway, New York
Waterbury Company, 63 Park Row, New York
Williams, Wm. E., 62 Front Street, New York

WIRELESS APPARATUS AND TELEGRAPHS
Cutting & Washington Radio Corporation, 6 West 48th Street, New York
Kilbourne & Clark Manufacturing Co., Seattle, Wash.
Livingston & Company, J., Grand Central Terminal, New York
Marconi Wireless Telegraph Co. of America, Woolworth Building, New York

WIRING DEVICES
(See Marine Wiring Devices)

WOODWORKING MACHINERY
Chicago Pneumatic Tool Company, Fisher Building, Chicago, Ill.
Cleveland Pneumatic Tool Company, Cleveland, Ohio
Independent Pneumatic Tool Company, 600 W. Jackson Blvd., Chicago, Ill.
Ingersoll-Rand Company, 11 Broadway, New York

WRECKING CABLES
Columbian Rope Company, Auburn, N. Y.
Plymouth Cordage Company, North Plymouth, Mass.
Waterbury Company, 63 Park Row, New York
Whitlock Cordage Company, 46 South Street, New York

WRECKING PUMPS
Blackmer Rotary Pump Company, Book Building, Detroit, Mich.
Davidson Company, M. T., 154 Nassau Street, New York
Kingsford Foundry & Machine Company, Oswego, N. Y.

WRENCHES
(Also Pipe Wrenches)
Camden Forge Company, Camden, N. J.
Coes Wrench Company, Worcester, Mass.
Greenfield Tap & Die Corporation, Greenfield, Mass.
Morse Twist Drill & Machine Co., New Bedford, Mass.
Whitman & Barnes Manufacturing Company, Akron, Ohio
Williams & Company, J. H., 63 Richards Brooklyn, N. Y.
Williams, Wm. E., 62 Front Street, New York

YACHT BROKERS
(See Ship Brokers)

YACHTS
(See Launches and Yachts)

YELLOW PINE
Long Bell Lumber Co., Kansas City, Mo.

YOKE CHRONOMETERS VALVES
Union Water Meter Company, Worcester Mass.
Williams, Wm. E., 62 Front Street, New York

ZINC DUST
New Jersey Zinc Company, 160 Front Street, New York
Williams, Wm. E., 62 Front Street, New York

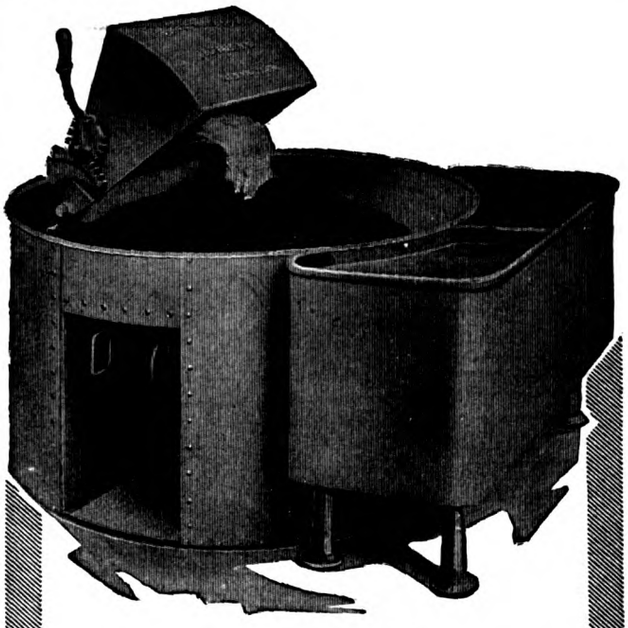
ZINC PLATES
New Jersey Zinc Company, 160 Front Street, New York
Williams, Wm. E., 62 Front Street, New York

ZINC SHIP AND BOILER PLATES
Edes Manufacturing Company, Plymouth, Mass.
Harvey Company, Arthur C., 274 Congress Street, Boston, Mass.
New Jersey Zinc Company, 160 Front Street, New York
Williams, Wm. E., 62 Front Street, New York

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

INDEX TO ADVERTISERS

	PAGE
Admiral Anchor Co., Philadelphia, Pa.	175
Alberger Pump and Condenser Co., New York	164
Almy Water Tube Boiler Co., Providence, R. I.	139
American Balsa Co., New York	5
American Bitumastic Enamels Co., New York	150
American Bureau of Shipping, New York	65
American Clay Machinery Co., Bucyrus, Ohio	154
American Engineering Co., Philadelphia, Pa.	26-27
American Flexible Bolt Co., Pittsburgh, Pa.	188
American Lead Pencil Co., New York	
American Manganese Bronze Co., Philadelphia, Pa.	10
American Manufacturing Co., New York	77
American Pipe Bending Machine Co., Boston, Mass.	153
American Spiral Pipe Works, Chicago, Ill.	96
American Steam Gauge & Valve Mfg. Co., Boston, Mass.	149
American Steel Foundries, Chicago, Ill.	60
Ames Shipbuilding & Dry Dock Co., Seattle, Wash.	143
Ashton Valve Co., Boston, Mass.	153
Atlantic Corporation, The, Boston, Mass.	179
Babbitt Steam Specialty Co., New Bedford, Mass.	135
Babcock & Wilcox Co., New York	141
Badenhausen Co., Philadelphia, Pa.	180
Badger & Sons Co., E. B., Boston, Mass.	71
Baldt Anchor Co., Chester, Pa.	195
Baltimore Dry Docks and Shipbuilding Co., Baltimore, Md.	152
Bantam Ball Bearing Co., Bantam, Conn.	137
Baush Machine Tool Co., Springfield, Mass.	90
Bay State Iron Works, New York	144
Benjamin Electric Mfg. Co., Chicago, Ill.	104
Bernstein Mfg. Co., Philadelphia, Pa.	118
Bethlehem Shipbuilding Corp., Ltd., Bethlehem, Pa.	131
Blackmer Rotary Pump Co., Detroit, Mich.	66
Bogert, John L., New York	155
Bolinders Company, New York	52
Bradley, C. C. & Son, Syracuse, N. Y.	94
Brenzinger, A. H., New York	155
Bridgeport Brass Co., Bridgeport, Conn.	67
Broderick & Bascom Rope Co., St. Louis, Mo.	149
Brown Hoisting Machinery Co., Cleveland, Ohio.	130
Brubaker, W. L., & Bro., New York	83
Brunswick Refrigerating Co., New Brunswick, N. J.	30
Bryant Electric Company, Bridgeport, Conn.	137
Buffalo Forge Co., Buffalo, N. Y.	197
Butterfield, W. P., Ltd., Yorks, England	
Camden Forge Co., Camden, N. J., outside front cover and	99
Cameron Steam Pump Works, A. S., New York	128
Carlin, Anthony, Cleveland, Ohio....Below Table of Contents	
Cedarvall & Soner, F. R., Gothenburg, Sweden	138
Central Foundry Co., New York	135
Chadburn (Ship) Telegraph Co., Troy, N. Y.	57
Chambersburg Engineering Co., Chambersburg, Pa.	148
Champion Rivet Co., Cleveland, Ohio.....Outside Back Cover	
Chicago Pneumatic Tool Co., Chicago, Ill.	40
Cincinnati Electric Tool Co., Cincinnati, Ohio.	151
Cleveland Pneumatic Tool Co., Cleveland, Ohio.	123
Cleveland, Punch and Shear Works Co., Cleveland, Ohio.	56
Cleveland Steel Tool Co., Cleveland, Ohio.	132
Coes Wrench Co., Worcester, Mass.	42
Columbian Bronze Corp., New York	55
Columbian Rope Co., Auburn and New York	
Consolidated Shipbuilding Corp., Morris Heights, N. Y.	143
Continental Iron Works, The, Brooklyn, N. Y.	159
Cooks' Sons, Adam, New York	161
Cory, Chas. & Son., Inc., New York	187
Cox & Stevens, New York	153
Cramp, Wm. & Sons, Ship & Engine Bldg Co., Philadelphia	53
Crandall Engineering Co., East Boston, Mass.	172
Crane Co., Chicago, Ill.	81
Crouse-Hinds Co., Syracuse, N. Y.	—
Cutting & Washington Radio Corp., New York	142
Dake Engine Co., Grand Haven, Mich.	154
Dart Mfg. Co., E. M., Providence, R. I.	152
Davidson, M. T., Co., New York	140
Davis, M. M. & Son, Inc., New York	142
Dean Bros. Steam Pump Works, Indianapolis, Ind.	97
De Laval Separator Co., New York	84
De Laval Steam Turbine Co., Trenton, N. J.	115
Dew Valve Co., New York	126
Diamond Power Specialty Co., Detroit, Mich.	74
Dixon Crucible Co., Jos., Jersey City, N. J.....13 and	147
Donnelly, W. T., New York	85
Dravo-Doyle Co., Pittsburgh, Pa.	154
Du Pont de Nemours & Co., E. I., Wilmington, Del.	130



A Cool Shop in Summer

BUFFALO Down Draft Forges remove smoke, gases and heat from the shop through tile or concrete ducts underground.

There are no troublesome metal pipes to collect dust, obstruct light, take up room, reduce the air space, or that need to be constantly replaced.

"Down Draft" means permanence and a cleaner, cooler shop.

Write for Catalog 108-63

BUFFALO FORGE COMPANY
BUFFALO, N. Y., U. S. A.

"Buffalo"

Generated on 2024-09-12 08:22 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Topping Brothers

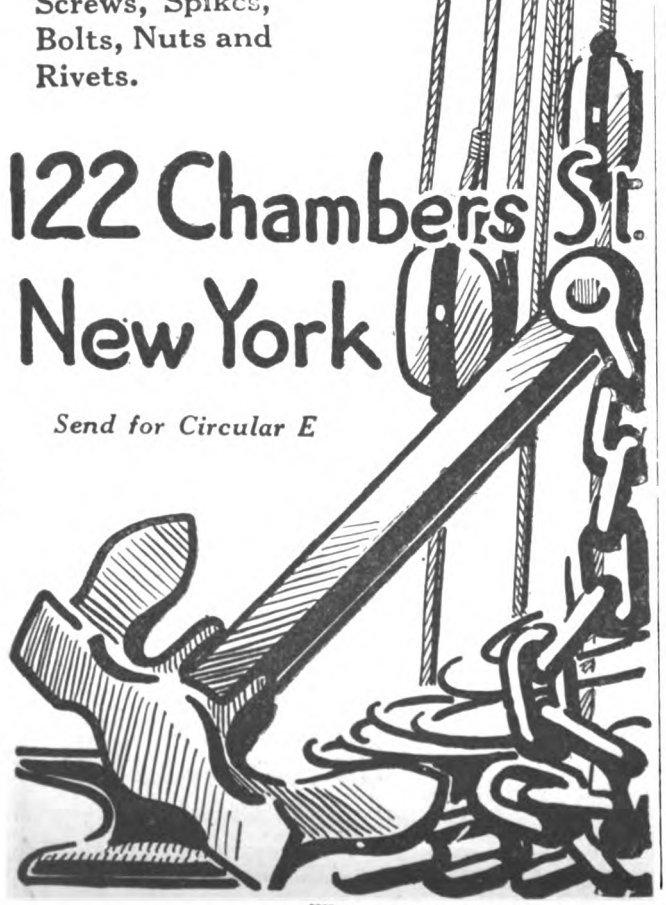
ESTABLISHED 1885

HEAVY & MARINE HARDWARE

Port Lights
Ship Clamps
Clinch Rings
Chain and Anchors
Shackles
Contractors' Tools
Plankers' jacks
Wire Rope
Chain Hoists
Cabin Hardware
Screws, Spikes,
Bolts, Nuts and
Rivets.

122 Chambers St.
New York

Send for Circular E

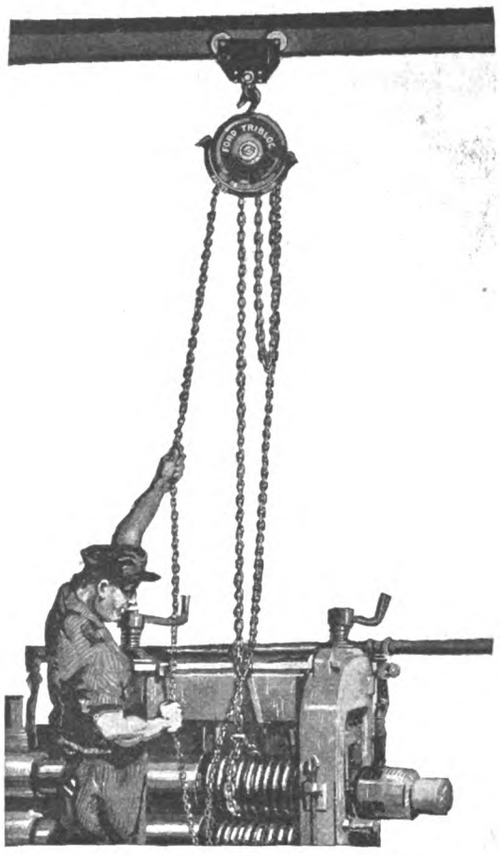


	PAGE
Du Pont Fabrikoid Co., Wilmington, Del	136
Durable Wire Rope Co., Boston, Mass	138
Edes Mfg. Co., Plymouth, Mass	154
Edwards & Co., Inc., New York	136
Engbergs Electric & Mechanical Wks., St. Joseph, Mich.	122
Epping-Carpenter Pump Co., Pittsburgh, Pa	146
Fairbanks, Morse & Co., Chicago, Ill	32
Falk Co., The, Milwaukee, Wis	87
Ferdinand & Co., L. W., Boston, Mass	12
Ferris, Theodore, New York	155
Fire Detecting Wire Co., New York	151
Fletcher Co., W. & A., Hoboken, N. J	154
Flory Mfg. Co., S., Bangor, Pa	124
Ford Chain Block & Mfg. Co., Philadelphia, Pa	199
Foster Bros. Mfg. Co., Utica, N. Y	127
Foundation Co., The, New York	125
France Packing Co., Philadelphia, Pa	152
Frick Company, Waynesboro, Pa	178
Galbraith & Son, C. C., New York	—
General Electric Co., Schenectady, N. Y	28, 29 and 36
General Welding & Equipment Co., Boston, Mass	148
Goodrich Rubber Co., B. F., Akron, Ohio	114
Goodyear Tire & Rubber Co., Akron, Ohio	37
Gracey & Sons Co., R., Pittsburgh, Pa	144
Granger, Geo. B. & Co., New York	154
Graton & Knight Mfg. Co., Worcester, Mass	68
Great Lakes Engineering Wks., Detroit, Mich	189
Greenfield Tap & Die Corp., Greenfield, Mass	109
Griscom-Russell Co., New York	49
Gwilliam Co., The, New York	138
Haight, Robert S., New York	155
Hallidie Company, Spokane, Wash	150
Hand, John E., & Son Co., Haddonfield, N. J	141
Hardie-Tynes Mfg. Co., Birmingham, Ala	185
Harris, Leonard B., New York	155
Harvey Co., Arthur C., Boston, Mass	6
Heine Safety Boiler Co., New York	102
Heppenstall Forge & Knife Co., Pittsburgh, Pa	91
Hooven, Owens, Rentschler Co., Hamilton, Ohio	113
Hough, Edward S., San Francisco, Cal	155
Howard Shipyards & Dock Co., Jeffersonville, Ind	153
Howden, James & Co., Glasgow and New York	196
Hyde Windlass Co., Bath, Me	120 and 191
Imperial Shipbuilding Corp., Detroit, Mich	124
Independent Pneumatic Tool Co., Chicago and New York	192
Ingersoll-Rand Co., New York	93
International Compositions Co., New York	8
International Nickel Co., New York	24-25
Irving Iron Works Co., Long Island City, N. Y	129
Isherwood, J. W., London and New York	88
Jacobs, J. L. & Co., Chicago, Ill	155
Jerguson Gage & Valve Co., Somerville, Mass	133
Johannsen, H. S., New York	92
Johnson, Arthur F., Milwaukee, Wis	155
Johnson Iron Works, Ltd., New Orleans, La	144
Johns-Pratt Co., Hartford, Conn	95
Kearfott Engineering Co., New York	72
Keller Pneumatic Tool Co., Grand Haven, Mich	131
Kennedy Valve Mfg. Co., Elmira, N. Y	146
Kerr Machinery Corp., Detroit, Mich	140
Kilbourne & Clark Mfg. Co., Seattle, Wash	145
Kingsbury, Albert, Pittsburgh, Pa	156
Kingsford Foundry and Machine Co., Oswego, N. Y	120
Kinney Manufacturing Co., Boston, Mass	126
Klaxon Company, New York	110
Kroeschell Bros., Ice Machine Co., Chicago, Ill	134
Lakeside Bridge and Steel Co., North Milwaukee, Wis	119
Lane, C. M., Life Boat Co., Brooklyn, N. Y	152
Leslie Stevens Co., New York	155
Lidgerwood Mfg. Co., New York	76
Linde Air Products Co., New York	Inside Front Cover
Livingston & Co., J., New York	139
Locomotive Superheater Co., New York	138
Long-Bell Lumber Co., Kansas City, Mo	134
Lord Construction Co., New York	127
Lovekin Pipe Expanding & Flanging Mach Co., Phila., Pa	143
Lovell, F. H. & Co., Arlington, N. J	39
Lukens Steel Co., Coatsville, Pa	62

Generated on 2024-09-12 08:05 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

	PAGE
Lunkenheimer Co., The, Cincinnati, Ohio	181
Lynd-Farquhar Co., Boston, Mass	182
Lysholm, Henry, Philadelphia, Pa	155
McClelland, N. E., Inc., New York	155
McDougal-Duluth Co., Duluth, Minn	12
McIntosh & Seymour Corp., Auburn, N. Y	141
McMyler-Interstate Co., Cleveland, Ohio	167
McNab Co., The, Bridgeport, Conn	145
Magnesia Association of America, Philadelphia, Pa	3
Maine Electric Co., Portland, Me	158
Malleable Iron Fittings Co., Branford, Conn	151
Manitowoc Shipbuilding Co., Manitowoc, Wis	59
Manning, Maxwell & Moore, Inc., New York	116
Marconi Wireless Telegraph Co	50
Marine Decking & Supply Co., Philadelphia, Pa	43
Martell Packing Co., Elyria, Ohio	153
Mason Regulator Co., Boston, Mass	148
Merchant Shipbuilding Corp., Chester, Pa	142
Metal & Thermit Corp., New York	151
Midwest Engine Co., Indianapolis, Ind	70
Mietz Corporation, August, New York	80
Milwaukee Electric Crane & Mfg. Co., Milwaukee, Wis	148
Monks & Johnson, Boston, Mass	31
Moon, George C. Co., Garwood, N. J	152
Morris Machine Works, Baldwinsville, N. Y	183
Morse, Andrew J & Sons, Inc., Boston, Mass	12
Morse Dry Dock and Repair Co., Brooklyn, N. Y	34
Morse Twist Drill & Machine Co., New Bedford, Mass	152
Mott Iron Works, J. L., New York	136
Mundy Hoisting Engine Co., J. S., Newark, N. J	119
Mutual Truck Co., Sullivan, Indiana	—
National Hoisting Engine Co., Harrison, N. J	174
National Tracing Cloth Co., Saylesville, R. I	17
National Tube Co., Pittsburgh, Pa	75
Neptune Boat Works, Brooklyn, N. Y	134
Newburgh Shipyards, Inc., Newburgh, N. Y	149
New Jersey Zinc Co., New York	11
New London Ship & Engine Co., Groton, Conn	82
Newport News Ship Building & Dry Dock Co., Newport News, Va.	152
New York Blue Print Paper Co., New York	137
New York Engineering Co., New York	163
Nicholson File Co., Providence, R. I	135
Niles-Bement Pond Co., New York	22-23
Nilson, Leonard J., Baltimore, Md	155
Norbom Engineering Co., Philadelphia, Pa	112
Northwest Engineering Works, Green Bay, Wis	171
Norwalk Iron Works Co., South Norwalk, Conn	168
Novelty Electric Co., Philadelphia, Pa	15
Ohio Blower Co., Cleveland, Ohio	142
Oldham, Geo., & Son Co., Philadelphia, Pa	151
Oxweld Acetylene Co., Newark, N. J	—
Pacific Construction & Engineering Co., Seattle, Wash	162
Pacific Machine Shop and Mfg Co., Seattle, Wash	184
Pacific Marine Iron Works, Portland, Ore	41
Page Steel & Wire Co., New York	64
Parkesburg Iron Co., Parkesburg, Pa	133
Parsons Marine Steam Turbine Co., New York	147
Pawling & Harnischfeger Co., Milwaukee, Wis	58
Pease Co., C. F., Chicago, Ill	132
Peninsula Shipbuilding Co., Portland, Oregon	177
Penn Seaboard Steel Corp., Philadelphia, Pa	152
Pittsburgh Filter & Engineering Co., Pittsburgh, Pa	170
Plymouth Cordage Co., North Plymouth, Mass	101
Poole Engineering & Machine Co., Baltimore, Md	48
Powell, William Co., The, Cincinnati, Ohio	125
Power Specialty Co., New York	123
Pratt & Cady Co., Inc., Hartford, Conn	200
Pratt & Whitney Co., New York	23
Prest-O-Lite Co., Inc., New York	4
Quickwork Co., The, St. Mary's, Ohio	137
Redington Standard Fittings Co., Bethlehem, Pa	131
Reading Iron Wks., Reading, Pa	35
Refrigeration Engineering Co., Toledo, Ohio	134
Reid & Co., John, New York	121
Remington Machine Co., Wilmington, Del	146
Rich Tool Co., Chicago, Ill	79
Richardson-Phenix Co., Milwaukee, Wis	72
Roelker, H. B., New York	143
Ross Heater & Mfg. Co., Buffalo, N. Y	154
Rostand Mfg. Co., Milford, Conn	160

FORD TRIBLOC



In your plant

probably there are many time and labor-consuming operations (jobs which do not facilitate production) that could be turned over to a FORD TRIBLOC with efficiency and with a transfer of non-productive time to production.

Call in a TRIBLOC. It accomplishes more than a gang. With it one man does the work of many.

It operates at high speed—the patented *Loop Hand Chain Guide* prevents "gagging" or overriding of the flange. The planetary gears are steel. These and other features make a TRIBLOC dependable for consistent operation.

IN CAPACITIES OF ½ TON AND UP—

Guaranteed (in writing) for five years.

Ford Chain Block Company

Second and Diamond Sts. Philadelphia, Pa.

Paris Brussels Turin Rio de Janeiro Barcelona

2158-D

Generated on 2024-09-12 08:26 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

When the seat of a Pratt & Cady Renewable Seat Gate Valve becomes worn, you can insert new seat rings in a very few minutes. The valve is then as good as new and the cost is nominal compared with the cost of a new valve.

Anyone with a wrench can easily make this change. There is nothing to become loose or drop out and obstruct the line.

Seat rings are made of bronze in

PRATT & CADY
RENEWABLE SEAT GATE VALVES

The gate in these valves is a double-faced, wedge-shaped casting with side grooves, by means of which it slides on guides in the valve body.

Guides in the body are of equal thickness and the wedge can be taken out of the valve and replaced with the opposite faces in contact and give an accurate fit. In making repairs this is important.

These valves being double seated can be used with the pressure applied at either end.

Gauges are used in machining all parts to insure accuracy and interchangeability.

Made of bronze and iron in all sizes. Adapted for steam, air, oil, gas or water service.

Large stock at branches insures prompt service.

May we send you a catalog?

PRATT & CADY CO. INC.

Manufacturers of Valves, Asbestos Packed Cocks, Feed Water Heaters, Hot Water Generators, Hot Water Service Heaters and Power Pumps.

Boston, Chicago, Cleveland, Detroit, Hartford, New York, San Francisco, Minneapolis, Philadelphia, Pittsburgh

Representatives in all large cities

	PAGE
Row & Davis, Engineers, Inc., New York	117
Russell, Burdsall & Ward Bolt & Nut Co., Portchester, N. Y.	111
Saginaw Shipbuilding Co., Saginaw, Mich.	98
Sampson Coradge Works, Boston, Mass.	155
Sands & Son Co., A. B., New York	135
Schutte & Koerting Co., Philadelphia, Pa.	169
Severance Mfg. Co., S., Glassport, Pa.	176
Shepard Electric Crane & Hoist Co., Montour Falls, N. Y.	Inside Back Cover
Skandia Oil Engines, New York	92
Skinner & Eddy Corp., Seattle, Wash.	78
Smooth-On Mfg. Co., Jersey City, N. J.	62
Southern-Rome Co., Baltimore, Md.	166
Sperry Gyroscope Co., Brooklyn, N. Y.	108
Sprague Electric Works, New York	157
Spray Engineering Co., Boston, Mass.	186
Standard Motor Construction Co., Jersey City, N. J.	141
Standard Tool Co., Cleveland, Ohio	64
Standard Underground Cable Co., Pittsburgh, Pa.	151
Starrett, L. S., Co., Athol, Mass.	129
Steam Motors Co., Inc., Springfield, Mass.	138
Stevens Aylesworth Co., Inc., New York	150
Steward Davit & Equipment Corp., New York	153
Stine Screw Holes Co., Waterbury, Conn	145
Stratford Oakum Co., Geo., Jersey City, N. J.	8
Sturtevant Co., B. F., Boston, Mass.	45
Sumner Co., H. W., Seattle, Wash.	51
Sun Company, Philadelphia, Pa.	9
Taylor Instrument Companies, Rochester, N.Y.	13
Terry Steam Turbine Co., Hartford, Conn.	Facing Leading Article
Texas Company, The, New York	105
Thacher Propeller & Foundry Corp., Albany, N. Y.	107
Thomas Spacing Mch. Co., Pittsburgh, Pa.	190
Thomson Electric Welding Co., Lynn, Mass.	136
Thompson Spot Welder Co., Lynn, Mass.	136
Thorsen & Co., P. S., Brooklyn, N. Y.	151
Tiebout, W. & J., New York	145
Toch Brothers, New York	156
Todd Shipyards Corp., New York	140
Topping Brothers, New York	198
Traylor Engineering & Mfg. Co., Allentown, Pa.	46
Trout, H. G., Co., Buffalo, N. Y.	193
Ulrich Planfiling Equipment Co., Jamestown, N. Y.	163
Union Dry Dock and Repair Co., Weehawken, N. J.	12
Union Water Meter Co., Worcester, Mass.	146
United States Electrical Tool Co., Cincinnati, Ohio	122
United States Metallic Packing Co., Philadelphia, Pa.	154
United States Rubber Co., New York	69
United States Shipping Board Emergency Fleet Corp., Philadelphia, Pa.	33
Universal Safety Tread Co., Boston, Mass.	152
Upson-Walton Co., New York	147
Valk & Murdoch Co., Charleston, S. C.	8
Vulcan Iron Works, Jersey City, N. J.	132
Wager Furnace Bridge Wall Co., Inc., New York	138
Ward, Chas., Engineering Works, Charleston, W. V.	139
Waterbury Co., New York	86
Watson-Stillman Co., New York	127
Watts J Murray, Philadelphia, Pa.	155
Wayne Oil Tank & Pump Co., Fort Wayne, Ind.	38
Western Electric Co., New York	131
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.	20-21
Weston Electrical Instrument Co., Waverly Park, Newark, N. J.	133
Wheeler Condenser & Engineering Co., Carteret, N. J.	173
Wheeler Mfg. Co., C. H., Philadelphia, Pa.	44
Whitlock Cordage Co., New York	6
Whittelsey and Whittelsey, New York	—
Whitman & Barnes Mfg. Co., Akron, Ohio	148
Wilcox, Crittenden & Co., Inc., Middletown, Conn.	133
Williams Co., J. H., Brooklyn, N. Y.	103
Williams Valve Co., D. T., Cincinnati, Ohio	132
Williams, Wm. E., New York	4
Wilson Welder & Metals Co., New York	89
Winton Engine Works, Cleveland, Ohio	130
Wolverine Motor Works, Bridgeport, Conn.	6
Woolley, E. L., Co., Providence, R. I.	156
Worthington Pump and Machinery Corp., New York	8-9
Wyatt Mfg. Co., Thos., Boston, Mass.	53
Yale & Towne Mfg. Co., New York	48
Yarrow & Co., Glasgow, Scotland	47
York Mfg. Co., York, Pa.	94

Generated on 2024-09-12 08:04 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Inherently Sound in Design and Construction

"SHEPARD DESIGN" means the successful adaptation of the most advanced principles of electrical operation and control to Crane and Hoist building. It means unit construction of the hoisting mechanism—motor, gearing, brake and drum protected from injury, dirt and moisture by an iron housing.

"Shepard Construction" means all structural parts of ample section and weight for the loads to be carried and a rugged strength throughout that insures long and carefree service.

The Shepard Line includes Electric Traveling Cranes, Monorail Cranes and Hoists with either plain or motor-operated trolleys. ½ to 30 tons. Our Engineers are at your service.

SHEPARD ELECTRIC CRANE & HOIST CO.

Montour Falls, N. Y.

New York, Philadelphia, Chicago, Pittsburgh, Boston, Baltimore, Cleveland, San Francisco, Montreal, Melbourne, London

2009-S

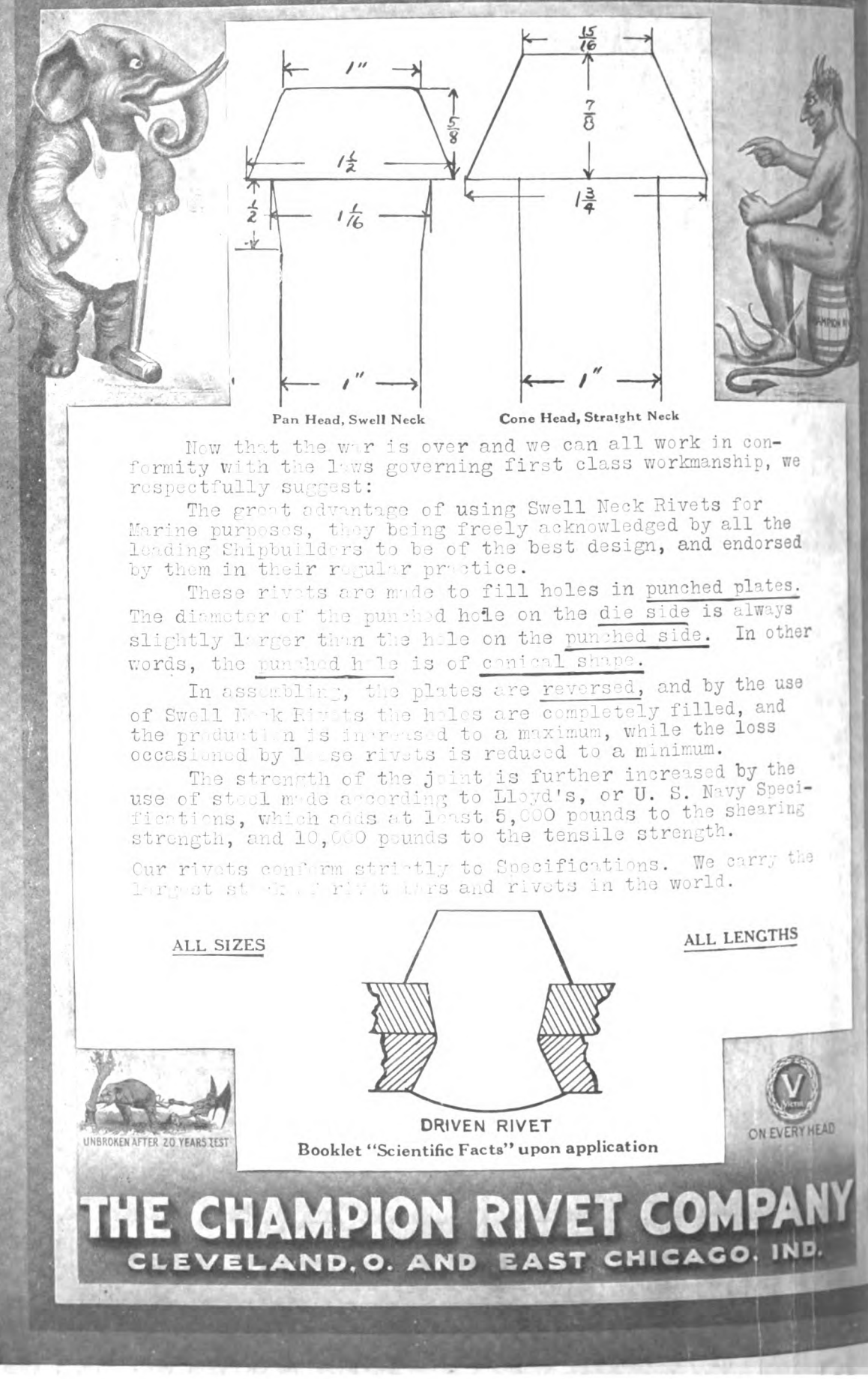
REG. U.S. PAT. OFF.

SHEPARD
ELECTRIC CRANES & HOISTS

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN



Pan Head, Swell Neck

Cone Head, Straight Neck

Now that the war is over and we can all work in conformity with the laws governing first class workmanship, we respectfully suggest:

The great advantage of using Swell Neck Rivets for Marine purposes, they being freely acknowledged by all the leading Shipbuilders to be of the best design, and endorsed by them in their regular practice.

These rivets are made to fill holes in punched plates. The diameter of the punched hole on the die side is always slightly larger than the hole on the punched side. In other words, the punched hole is of conical shape.

In assembling, the plates are reversed, and by the use of Swell Neck Rivets the holes are completely filled, and the production is increased to a maximum, while the loss occasioned by loose rivets is reduced to a minimum.

The strength of the joint is further increased by the use of steel made according to Lloyd's, or U. S. Navy Specifications, which adds at least 5,000 pounds to the shearing strength, and 10,000 pounds to the tensile strength.

Our rivets conform strictly to Specifications. We carry the largest stock of rivet bars and rivets in the world.

ALL SIZES

DRIVEN RIVET

ALL LENGTHS

UNBROKEN AFTER 20 YEARS TEST

Booklet "Scientific Facts" upon application

ON EVERY HEAD

THE CHAMPION RIVET COMPANY

CLEVELAND, O. AND EAST CHICAGO, IND.

Generated on 2024-09-12 08:06 GMT / https://hdl.handle.net/2027/uiug.30112004006158
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google

Digitized by Google

Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN